REFLECTIONS ON THE NUMERALS "ONE" AND "TWO" IN ANCIENT INDO-EUROPEAN LANGUAGES

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I

It may be said that the numerical systems used among civilized peoples are the outcome of a long development which for the greater part occurred in prehistoric times. Only by a careful combination of philological, linguistic, and ethnological data may we hope to shed some light on these processes as far as, for instance, the Indo-European family of languages is concerned. One of the conclusions scholars by applying this method have arrived at is this, that the abstract numerals and operations effected by means of them are evidently unusual before an advanced stage of culture has been reached [1]. It is, on the other hand, an often recorded fact that those so-called primitive peoples which practically do without counting and without our numerical systems, their numerals being very limited, are able to make sure that a herd of cattle or a heap of fruit is complete, and that they are enabled by their language to designate a definite number, say 10, of definite objects, say hogs or coco-nuts, by a special term. Thus in the Motu language of New-Guinea *bala* means „10 hogs", *varo* „10 coco-nuts". Here the numeral concept is inherent in the term denoting the object; it is expressed differently according to the objects denoted; it does not form part of a series of numerals. As is well-known, Lévy-Brühl [2] styled those terms 'ensembles-nombres'.

Another closely related trait of the synthetic way of conceiving phenomena peculiar to these peoples and manifesting itself in their languages is their predilection for counting not single units but groups, pairs, pentads etc. Among these groups the smallest possible, the pair, takes a prominent rank. The so-called 'pair system' is a wide-spread phenomenon, which has already attracted the attention of many authors [3]. The symmetry of the human body, the duality of sex, the occurrence of various pairs of entities and phenomena, such as heaven and earth, sky and earth, day and night, plains and mountains, land and sea, the two parties in war, games, and commercial transactions, the two sub-divisions

1) See, e.g., R. Thurnwald, in Ebert, Reallexikon der Vorgeschichte, vol. XIV, s.v. Zählen; E. Fettweis, Das Rechnen der Naturvölker, Leipzig-Berlin 1927; E. Cassirer, Philosophie der symbolischen Formen I, Berlin 1923, p. 180 f.; W. Hartner, Zahlen und Zahlensysteme bei Primitiv- und Hochkulturvölkern, in Paideuma II, 1943, p. 268 f.; J. Popken, De jeugdperikelen van het getal, Utrecht University 1947, and some of the books and papers mentioned by these authors.

2) L. Lévy-Bruhl, Les fonctions mentales dans les sociétés inférieures[9], Paris 1928, p. 219 f. Such terms for military units as *battalion*, *company* etc., on the understanding that they consist of a definite number of soldiers, may be fair samples of this device in a modern language.

3) See, e.g., P. W. Schmidt S.V.D., Die Sprachfamilien und Sprachenkreise der Erde, Heidelberg 1926, p. 360 ff.; Fettweis, o.c., ch. III; G. Friederici, Beiträge zur Völker- und Sprachenkunde von Deutsch-Neuguinea, p. 179; R.H. Codrington, Melanesian Languages, Oxford 1885, p. 211 ff.; M. Schmidt, Zahl und Zählen in Afrika, Mitt. Anthr. Ges. Wien 1915, p. 193 f. – As is well known, the 'pair system' has numerals for 'one' and 'two' and forms the higher numerals by addition to 'two' or 'the pair'. It is found in Australia, in many Papuan idioms, in S. America and with the African Bushmen. However, it also occurs in various associations with other numerical systems. See also I.L. Hammerich, Humanisme en Taalkunde, Groningen 1952, p. 7 f. (Eskimo).

of the tribe among many peoples, the breaking in two halves of sticks, branches and other objects [4] have without any doubt not failed to impress on mankind the fundamental importance of the 'pair concept'. The sets of two similar or corresponding things naturally existing together, nay, the objects consisting of two equal or corresponding parts, the groups of two beings, parties etc. are, indeed, legion. "Malgré ce qu'il y a, à nos yeux, de contradictoire dans les termes, l'on doit accepter que, chez les Mélanésiens, la parité constitue l'unité. L'un n'est qu'un élément de cette dualité, qui est formée, en sa symétrie, de cet élément, et d'un autre. Chacun de ceux-ci est l'autre par rapport au premier. Et ces deux éléments ne se ramènent pas à un plus un (1 + 1), mais à l'autre et l'autre. L'autre est la fraction d'un ensemble... Un n'est pas une qualité d'unité, mais d'altérité" [5].

Attention may also be drawn to the more or less important rôle duality has played in the ancient Indian, Iranian, Roman conceptions of a religious, mythological, philosophical and political order [6]. The worship in pairs of a rather large number of divinities is for instance a peculiar feature of Vedic mythology: apart from *Dyāvāpṛthivī* "Heaven and Earth", "Earth and Sky", which already came to our notice, we find Mitra-Varuṇa, Indra-Vāyu, Soma-Pūṣan, Indra-Bṛhaspati etc. etc. [7]. Some sixty hymns of the entire corpus of the Ṛgveda are addressed to such dual deities, and in isolated verses more pairs occur. Part of these pairs were regarded as so indissolubly connected in nature that the myths of their forming unity or belonging together are widely diffused: the conjugal union of Heaven and Earth, the close association of Nara and Nārāyaṇa in later times [8]. The demons of various kinds, though usually conceived as forming an indefinite crowd, are sometimes also regarded as living and acting in pairs. Above all, the age-long endeavours of the Indian mind to establish the complementary character of soul or spirit and nature or matter and its unflinching efforts to show that, from the true or higher point of view,

4) See especially C. von den Steinen, Unter den Naturvölkern Zentralbrasiliens, Berlin 1894, p. 414 f.

5) M. Leenhardt, Langues et dialectes de l'Austro-Mélanésie, Paris 1946, p. XXXV; see also 'La personne mélanésienne', by the same author (published in Annuaire de l'Ecole pratique des Hautes Etudes, Section des Sciences Religieuses, Paris 1942, p. 14). Lévy-Bruhl suggested using the term 'dualité unité'.

6) In religious conceptions in general duality often plays a prominent part: a pair of twin gods forming unity and yet becoming estranged has for instance given occasion to many myths; other gods are conceived as a married pair; sun and moon, heaven and earth are universal models of divine pairs. For the dualism of body and soul, the former being regarded as in itself inert, impotent and godless, the latter conceived as a living, potent and divine power see e.g. the explanations given by G. van der Leeuw, Religion in essence and manifestation, London 1938, ch. 40 ff.

7) For particulars see A.A. Macdonell, Vedic Mythology, Strassburg 1897, p. 126 ff.; A.B. Keith, The Religion and Philosophy of the Veda and Upanishads, Cambridge Mass. 1925, p. 220 f.; G. Dumézil, Mitra-Varuṇa, Paris 1948.

8) See e.g. R.G. Bhandarkar, Vaiṣṇavism, Śaivism and minor religious systems, Strassburg 1913, p. 32 f. See also A. Meillet, in the Mélanges Boisacq (Annuaire de l'Inst. de Phil. et d'Hist. orient. et slaves; Brussels 5, 1937), I, p. 1: "il est naturel de voire dans les deux mots (viz. Arm. *erkin* "sky, heaven", *erkir* "the earth") l'expression des deux moitiés de l'universe, la moitié mâle et la moitié femelle" (cf. Arm. *erku* "two").

duality is the outcome of nescience and unity of that which appears to be dual is the sole reality, can make clear to us how considerable an influence the duality-unity concept could have exercised [9].

How fundamental a concept this 'dualité unité' can be may be illustrated by referring to the Highest(s) Being(s) of the Indonesian people of the Dyaks (Borneo): their two highest gods are not only a duality, but also a unity. "Auf dem Vordergrund aller religiösen Handlungen steht diese Einheit der Zweiheit. Es ist immer die totale Gottheit, die angerufen wird... Man kann nicht sagen, dass sich aus der Einheit die Zweiheit entwickelt hätte, die Einheit war nach den Quellen immer eine Zweiheit und die Zweiheit auch immer eine Einheit" [10]. Where people are under the influence of this way of regarding duality, what is dual in our eyes, is regarded as one; pairs of shoes, gloves etc. are designated as one object. fruits, fishes and other merchandise are counted in pairs, and, like our *tandem* "a pair of horses harnessed one behind another", such a pair is "one". The 'numeral' 20 in the language of the inhabitants of the Duke of York Island must be translated by 40 in modern Western languages. In a comparable way Hungarian *fél kéz* means "one (of the two) hands", *fél* conveying the idea of "the half (of)". In Javanese *palih* means "the half", the derivative *palihan* together with a word for "brother, sister": "foster-brother". In Irish which often denominates limbs and organs which occur in pairs by means of a group consisting of the relevant noun preceded by "two", one hand, eye, ear, etc. is indicated by the prefix *leth-* "half": *súil* "eye", *dí súil* "the eyes", *leth-súil* "a single eye"; *leath-súileach* "one-eyed". The Dyaks reckon by double-doits called *sa-goban* (*sa-* expresses the idea of unit); 10 doit is *sa-wan*, but 12 doit: *sa-wan sa-goban*; 60 doit is a *suku*,

9) It is, in this connection, worth noting that there are many passages in the ancient Indo-European literature in which the ideas of duality, of two being one, of two forming unity, or of a unity being achieved by combining or putting two together are more or less evidently expressed. Suffice it to mention some Indian texts: RV. 10, 129,1 f. *asat* and *sat* "the non-existent and the existent", space and heaven, death and non-dying, day and night; when these pairs did not exist the one (*ekam*) breathed by its own power. Prajāpati who is said to have existed alone 'in the beginning' (SatBr. 2,2,4,1) and to embrace all things (RV. 10,121,10), is elsewhere regarded as both gods and men (SatBr. 6,8,1,4), as both the defined and the undefined (7,2,4, 30), one half of him is mortal, and the other immortal (10,1,3,6). SatBr. 7,1,1,35 the fire (*agni*) from the sun is called the twenty-first enclosing-stick, and this fire (i.e. the terrestrial fire) is established in the sun; the fire and the sun being thus established in each other, both of them are now considered to be the twenty-first. 5,3,1,10 *te vā ete dve satī ratne ekaṃ karoti sampadaḥ kāmāya* "these two, while being (the) two jewels (of the king), he makes one for the purpose of completion (completeness, perfection)". More than once the twofold character of an entity is made an argument in a passage dealing with two objects: SatBr. 6,4,1,3 "with two (viz. formulas) he digs: two-footed is the sacrificer... and twofold also is that form of his (since it consists of) clay and water"; cf. 12. Elsewhere one becomes twofold: SatBrāhm. 10,1,3,2 "(Prajāpati) became twofold (*dvayam*), clay and water". - It may be added that in stating the twofold nature of an entity the observation is explicitly subjoined that "there is no third": SatBr. 1,1,1,4 *dvayaṃ vā idam na tṛtīyam asti satyaṃ caivānṛtam* 'twofold, verily, is this, there is no third, to wit truth (the real) and untruth". - Compare also BāUp. 1,4,3; 17.

10) H. Schärer, Die Gottesidee der Ngadju Dajak in Süd-Borneo, Leyden 1946, p. 21 f.

and 120 doit is very often indicated by *duö suku* "two suku". As *suku* etymologically means "a quarter" 4 *suku* constitute a *kipiń*; however, they reckon with sukus up to 2 *kipiń*. Two *suku* are also called *sa-jampal* "a florin". In Negro-African tongues words meaning "pair, couple" have often given the usual numeral "two". Indo-European parallels are not completely wanting: the East-Bengali *bẽnṭ* "two" – the same sense is extremely common in Early Oriya [11] – goes back to the Ancient-Indian *veṇi, veṇṭ* "braided hair, a braid of two bands of hair", and also "the conflux or meeting of two (or sometimes more) streams in a common point of union".

Primitive and semi-primitive man who generally speaking has a dislike of abstract and analytical thought in the 'modern' scientific way [12] often groups and classifies the various entities and phenomena with which he is confronted in another way than scholars belonging to more differentiated stages of culture. He often prefers conceiving them collectively to distinguishing them individually. Hence so-called collective nouns [13] have a wide distribution in large parts of the 'primitive' world. Although the Negro-African languages, for instance, possess elements indicating the grammatical category of plural, many of them have collective nouns or forms expressing the idea of totality. Side by side with a form for "feather" there may exist a form for "feathers (collectively)". In these idioms not only singular: plural: totality, but also mass: part, collective: unit or unity, indefinite quantity: small quantity are often distinguished. The importance of collective nouns in early stages of the Semitic languages is well-known [14]. In Indo-European languages collectives were, as a rule, always numerous; in the grammatical systems of more than one branch of this linguistic family (Slavonic, Celtic, Armenian etc.) they have been a category of consequence [15]. A 'collective' unit can, further, be made up of any number of beings or objects; it can comprise a very limited number of them, even two. The Polish collectives for instance often denote a married pair. The essential is that a collective is from the synthetic and non-differentiating point of view "one", and from the analytic, quantitative, differentiating point of view more than one, a definite number. One of these two points of view may prevail, but under normal conditions of speech they often go together. It would appear to me that in daily parlance we all often prefer vague and indefinite collectives (*he has a large family; the country would not like to..; the whole school was punished*, etc.) to the more exact and unambiguous plurals and singulars of the language of science and administration. It would be useless to insist upon

11) S.K. Chatterji, Origin and development of the Bengali language, Calcutta 1926, p. 786.

12) See e.g. F. Boas, General anthropology, Boston 1938, p. 141 e.a.; G. van der Leeuw, L'homme primitif et la religion, Paris 1940, p. 25 ff.

13) For this technical term see O. Jespersen, The philosophy of grammar, London, ed. 1935, p. 195.

14) For a comprehensive survey see G. Royen, Die nominalen Klassifikations-Systeme in den Sprachen der Erde, Mödling-St.Gabriel 1929, p. 605 ff. (where p. 594-659 the subject of 'Kollektivität und Pluralität' is amply discussed).

15) As to Greek see the recent survey by Schwyzer, Griechische Grammatik II, p. 39 ff.

the well-known fact that, e.g. in English, the same collective is often attended by a plural verb when it is used to denote a collection of objects and by a singular when it is considered a unity: *the middle-class youth was as much prosecuted as are in our days the... youth of the fourth estate...* Useless to recall, too, that collective formations which came to do duty for a plural category are very apt to keep their original function (e.g. in Russian) or even to re-emphasize it on a large scale (remember the history of the *-a* plural in Latin) [16].

Yet it may be a fairly reasonable assumption that the spread of higher intellectual culture and the requirements of a developing economic and social life as a rule lead man to create more exact locutions and linguistic categories: higher numerals, nominal forms admitting of being attended by numerals or of expressing plurality (Indonesian languages [17]). In this connection the Indo-European words for the idea of 'totality', studied by Brugmann [18] are worthy of attention. Part of these terms, while originally – that is to say as far as we know originally – expressing collective ideas, such as completeness, fulness, (the state of) being undivided, without gaps or lacunae, or the state of unity or collective unity, came to apply also to plurality, to a dissolved unity: the German *ganz* [19] and the Latin *totus* are instances to go by: *die ganze Schule > die ganzen Schüler; die ganze Stadt > die ganzen Einwohner.* It would appear to me that the dissolution of those collective unities which were, and in certain classes remained, expressed by means of words discussed by grammarians in the chapter devoted to numerals, was, generally speaking, a parallel phenomenon.

We already intimated that words describing two objects normally forming couples, or considered as such are a class of collectives. It would therefore be needless to dwell at length upon the predilection of the ancient Indo-European languages for collectives of various kinds, a preference they have in common with the idioms of so-called primitive or semi-primitive societies or groups in general [20]. Collectives derived from elements to which a more or

16) We leave out of account here such cases as the Japanese substantive which, being neutral as to the category of number, may be said to denote a universal. The Indonesian noun has also turned up for discussion in connection with collectives (see e.g. Royen, o.c. 607 ff.). It is, as a rule, likewise indifferent to number (see my paper 'Het Maleise nomen en de numerus-categorie', Bijdragen tot de Taal-, Land- en Volkenkunde 98, The Hague 1939, p. 371 ff.). I would prefer to use the term 'collectives' only in those cases in which the words designated by it constitute a category which on the strength of linguistic characteristics differs from other categories.

17) See my remarks in Lingua III (1952), p. 17 ff.

18) Brugmann, Die Ausdrücke für den Begriff der Totalität in den indogermanischen Sprachen, Leipsic Univ. 1894.

19) For particulars see Brugmann, o.c., p. 29 ff. Compare also W. von Wartburg, Evolution et structure de la langue française[3], Bern 1946, p. 33.

20) See, e.g., also W. Wundt, Die Sprache[3], Leipsic 1911, II[3], 2 (1912), p. 32; B. Cassirer, Philosophie der symbolischen Formen I (1923), p. 194; W. Havers, Zur Bedeutung des Plurals, Festschrift Kretschmer, Vienna, 1926, p. 47 ff.; G. Royen, Die nominalen Klassifikations-Systeme in den Sprachen der Erde, Mödling (Vienna) 1929, p. 594 ff.; Chr.S. Stang, Zum indoeuropäischen Kollektivum, Norsk Tidsskrift for Sprogvidenskap, 13 (Oslo 1945), p. 282 ff.

less definite numeral concept is inherent are likewise far from rare: Gr. τριάς "group of 3, system of 3, triad, trinity"; Gr. δεκάς "company, group of ten, company in general" ~ AInd. *daśát-* "decad", OChSl. *desęt* "decad, 10" [21], Lit. *dẽšimt-* "10"; AInd. *paṅkti-* "row, set, collection of 5, any row, number, troop, assembly, company" ~ AIsl. *fimt* "a period of 5 days"; such Hindi terms as *battīsī* "an aggregate of 32 things" (*battīs* "32"), "set of teeth"; such Sanskrit locutions as *agnitretā* or *agnitraya-* "the three sacred fires"; *tadapatyadvaya-* "his two children"; *śataka-* "an amount or collection of 100, century, often comprising another number". The numerous passages in Vedic where *dvaya-* is used to indicate objects, entities, concepts, which exist in pairs, cannot fail to strike us: ŚatBr. 1,6,3,23 "twofold (*dvayam*) is this, there is no third, to wit the moist and the dry". Two objects belonging to the same class are also styled a *dvaya-*: ŚatBr. 2,3,1,24 *tad dvayam evaite āhutī*; 2,2,2,6. Cf. also 1,4,4,2; 3,7,2,3 and other texts. But authors living in a later period, e.g. Daṇḍin, often resort to *dvandva-* or *dvaya-* in speaking of two similar objects which belong together (e.g. the limbs of the body). In modern languages this preference has often persisted: Fr. *dizaine, douzaine, trentaine*, etc. etc. [22].

The frequency, in Ancient Indian, of such words as *dvandva-* may also be touched upon as a case in point. Originating in the repeated *dva-* (cf. ŚatBr. 1,9,2,6) it is already in Vedic prose used to denote various pairs and couples. Some texts are of special interest: ŚatBr. 8,4,4,5 *dve bhavato. dvandvaṃ hi pratiṣṭhā* "there are two of them, because the foundation is a pair (of feet)"; 6,2,17 the feet are likewise called a *dvandva-*; in connection with *dvau*: 4,3,1,3 *dvau hīndrāgnī dvandvaṃ hi mithunaṃ prajananam* "Indra and Agni are two and a pair (i.e. two when used in a similar context) are a productive couple". The latter part of this statement often recurs: 1,1,1,22; 2,3,1,23; cf. also 3,9,3,34; but elsewhere the text has *dvau* instead of *dvandva-*: 2,4,4,6 *dve vai mithunam* etc. "two indeed means a couple"; see also 7; 10,5,2,8.

Now, it may be surmised that these facts are related to, or may be connected with the phenomenon of the dual [23]. We cannot enter here into the discussion of the origin of the IE dual forms and

21) For particulars see A. Vaillant, Manuel du vieux slave, Paris 1948, p. 153.

22) Rhys Davids and Stede (T.W. Rhys Davids and W. Stede, The Pali Text Society's Pali-English Dict. IV, 168) are right in observing that 'the number two' can in various languages express a "symbolic, sentimental meaning", to wit that of "only two", i.e. "next to one" or "next to nothing". In the Pāli Vinaya-Piṭaka II, 107 *dumāsika* means "not more than two months"; *du(v)angula, dvangula* "two finger-breadths long etc.", implying the connotation of "not more than that" and so suggesting the idea of a minimum measure. Cf. in coll. Dutch *twee minuten* for a very short space of time. The above authors justly recall the two mites of the widow in Mark 12, 42.

23) Compare W. von Humboldt, Über den Dualis, Berlin Acad. 1827 (= Ges. Werke VI, p. 4 ff.), esp. p. 21 and 25; A. Meillet, in Bulletin de la Société de Linguistique de Paris, 53 (1905), p. XCV; H. Hirt, Die Indogermanen, Strassburg 1905-1907, I, p. 88 ff.; J. Vendryes, Sur le nombre duel, Comptes-rendus de l'Académie des Inscr. et Belles-Lettres, Paris 1937, p. 116 ff. = Choix d'études linguistiques et celtiques, Paris 1952, p. 91 ff.; and Hartner, o.c., p. 274.

plural categories [24]. Let it suffice to remember that the dual is a decaying category, not only in those IE languages in which it occurs but also elsewhere; in many IE languages it has left little or no trace. It may even be said that it has tended to disappear where civilization had "reached a certain stage of development", or rather, when a definite mental or cultural structure was given up [25].

It cannot be denied that the dual, in IE and other languages, serves to denote a duality (things or persons having a twofold nature, things or persons which, from a point of view which may be ours, can be said to be two, twofold or double [26]), without being attended by a separate and abstract numeral for two. The Arabic *sāriqāni*, which is one word, answers to our "two thieves", and such cases as the Gr. ἐγώ "I", νώ "I and another, we two", ἡμεῖς "we" have much in common with the above „ensembles-nombres". The duality concept is inherently expressed in the form. It is for us, modern men, not easy exactly to formulate what such a duality concept meant. Gauthiot [27] at the time tried to demonstrate that in Indo-European Skt. *akṣī*, Gr. ὄσσε, Lit. *akì* did not, properly speaking, mean "les deux yeux", "la paire d'yeux", "l'oeil et l'autre oeil", but "l'oeil, en tant que double". In the same way Ved. *mitrā* is, he held, "Mitra, en tant que double", "car Varuṇa est le double de Mitra et relève de la même classe"; *ahanī* "le jour, en tant que double" comprises the night. To this view the objection may be raised that *ahan, ahaḥ* does not mean "one of the two parts of the natural day" [28], the compound *aharniśam* (Manu etc.) denoting the "24-hour day", and *aharjāta-* (AthV.3,14, 1) meaning "born from day", i.e. "not belonging to the spirit of night or darkness"; the Avestan equivalent *ayan-, ayar-* is unambiguously used for "day" as opposed to "night" (e.g. Yt.1,18; Aog. 51); Skt. *rātryahanī* (Manu 1,66) like *ahanī* means "day and night". Nor can it be maintained either, that *Mitrā* = Mitra and Varuṇa, properly means "Mitra, en tant que double". It is perfectly true that these two gods are associated in a very notable way, but it is Varuṇa who is the predominant figure, not Mitra, who owes his precedence in the compound *mitrāvaruṇau* only to the shorter form of his name [29]. Moreover, however closely connected

24) The glottogonic speculations ventured by A. Cuny, Etudes prégrammaticales, Paris 1924 (discussed by Royen, o.c., p. 514); M. van Blankenstein, Indog. Forsch. 21, p. 110; E.H. Sturtevant, American Journal of Philology 41, p. 248 etc. are highly questionable.

25) For the dual see: W. van Humboldt, Über den Dualis, Abh. Berlin. Academie 1827 (= Ges. Werke, VI, p. 4 ff.); A. Cuny, Le nombre duel en grec, Thesis Paris 1906, Introduction; J. Wackernagel, Vorlesungen über Syntax, I^2, Basel 1926, p. 73 ff.; W. Schmidt, o.c., p. 316 ff.; A. Meillet, in Bulletin de la Société de Linguistique de Paris 1905, p. XCV; J. Vendryes, o.c. 116 ff.; H. Hirt, Die Indogermanen, Strassburg 1905, I, p. 88 f.; L.H. Gray, Foundations of Language, New York 1939, p. 179 ff.; J. Bloch, L'indo-aryen, Paris 1934, p. 153 f.; J. Humbert, Syntaxe grecque, Paris 1945, p. 20 ff. and other works.

26) For the functions of the IE dual see Brugmann, Grundriss der vergl. Gramm. der indogerm. Spr.^{2}, II, 2, p. 449 ff.

27) R. Gauthiot, Du nombre duel, in Festschrift-V. Thomsen, Leipsic 1912, p. 131 f.

28) Generally speaking most IE words for "day" originally denoted the bright "day" as opposed to "night", and only secondarily the 24-hour "day".

29) Pāṇini 2,2,34; see also W. Caland, in Acta Orientalia 9. p. 59 ff. The same opinion is now expressed by H. Lüders, Varuṇa I, Göttingen 1951, p. 8, who rightly rejects Lommel's opposite view.

these gods are, they are distinct beings, representing related, but not identical powers or phenomena. They are, further, often mentioned with Aryaman or with other divinities with whom they constitute the group or collectivity of the Ādityas. Similar remarks might be made in connection with *dyāvā* "heaven and earth", *pitarā* "father and mother", with the frequent epic *Kṛṣṇau* = Kṛṣṇa and Arjuna Pāṇḍava who are *ekarathe sametau, ekarathe sthitau*, with *daityau* = *Sundopasundau bhrātarau* or *daityendrau*, the sons of Nikumbha in the Mahābhārata, and other such duals [30]. It is otherwise with the inseparable twins, the *Aśvinau*: although there are a few texts which may perhaps point to their originally having been separate [31], and arguments can be adduced for the supposition that the name *Nāsatya-* (the dual *Nāsatyau* = *Aśvinau*) originally applied to one of them, they practically constitute a pair of divine beings, not characterized by individual names. They are in fact compared to such different twin objects as eyes, hands, lips, feet, breasts, wings, or with birds and other animals going in pairs (RV. 2,39). There are, however, other duals which, as far as I am able to see, cannot be interpreted in the way suggested by Gauthiot. It has repeatedly been observed that the very coexistence of different stems for the singular and plural of the personal pronouns is in harmony with the fact that the relation between *I* and *we* is not the same as that existing between *horse* and *horses*. Why, then, should we assume that Skt. *āvām, nau*, Gr. νώ originally expressed just the idea of "moi, en tant que double"? [32].

So I would propose defining the function of the IE dual as follows: it denoted beings, entities, powers which being of the same class belonged together, constituted an ensemble in the form of a duality; it denoted phenomena which though being double, two-sided etc., presented themselves to, or were regarded by, the human mind as a unity or at least as closely connected; it denoted, in short, the complementary 'two-ness' [33].

Leaving this point, in its general aspects, undiscussed, we shall only deal here with the question whether there are particulars with regard to the use of the numerals for 'one' and 'two', - and of other words which are semantically connected, - in the ancient Indo-European languages and details in connection with the variety of their forms which may be interpreted as traces of the prehistoric existence of something like counting, reckoning, operating with 'dualités unités'. As there are, even in modern IE tongues, such signs of classifications other than that of the now usual singular: plural system - this may be seen in terms like *dozen, score* etc. - and as we even today, whether by some special need felt for singling out pairs, couples and other sets of two, or by traditional habits of dividing a century into two halves, four quarters etc., expressing stock-exchange quotations in such

30) For particulars see B. Delbrück, Altindische Syntax, Halle a.S., p. 98; J. Wackernagel, Altindische Grammatik, II, 1, Göttingen 1905, p. 150 ff.
31) The reader might be referred to A.A. Macdonell, Vedic Mythology, Strassburg 1897, p. 49.
32) These words are not discussed by Gauthiot in this connection.
33) Cf. also Brugmann, Grundriss^2, II, 2, p. 454.

fractions as $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, or of reckoning with *doubles, twopence, florins* and (Neth.) *dubbeltjes*, resort to this method of counting, there is no doubt room for the conclusion that no plausible reason can a priori be adduced why the 'Indo-Europeans' while possessing a dual should have been without anything like a 'dualité unité' concept.

It has been argued that linguistic developments have favoured the elimination of the dual: if a word expressing duality in itself (e.g. the numeral *two* or *both*, etc.) occurs in a predicative or attributive construction, the other member of that construction could easily do without agreeing by means of a characteristic form. Thus the distinction between one, two, and more than two, as far as duality is concerned, came to be expressed by (as a rule explicit) devices other than the old dual category and not sufficiently recurrent to cause a categorial feeling to subsist [34]. Is this way of formulating the process perfectly unambiguous?

What, then, was the exact meaning of *duō[u]* when it accompanied an ancient dual form? It may be asked whether the 'original' function of this word was preserved at the time when the dual category under changing cultural circumstances tended to disappear. If we are right in defining the function of the dual in the above way, *duō[u]* being a dual itself must, generally speaking, have possessed the same function. It cannot reasonably be assumed that this word expressed a completely abstract number like our modern 2, 6, or 9. Nor can it, as far as I am able to see, be supposed either that a so-called "zufällige Zweiheit" was originally denoted by δύω (δύο) with the plural of the noun rather than by the same word with the dual [35]. Unless it were tautological- which is not probable -, *duō[u]* may have been, in a sense, an emphatic or emphasizing element. If so, what was the difference between this 'numeral' and the word for "both" (AInd. *ubhau*, Gr. ἄμφω etc.), the most ancient function recognizable of which was described by Brugmann [36] in these terms: "(this word appears) in den betreffenden Sprachen (AIndian, Greek etc.) oft noch zugesetzt... um die Vorstellung zu betonen, dasz die Aussage von den zwei Gegenständen gleichmässig gilt"?

As it would appear to me that it is not altogether impossible to get an insight into the part played by *duō[u]* at the period when the dual was still a living category, we shall first discuss the relevant phrases and constructions in Ancient Greek. As is well known the Ionian dialect had, in accordance with the general tendency already alluded to, lost the dual number before the dawn of history; many rural idioms, on the other hand, continued using it in the 5th and 4th centuries B.C. In Attica the history of this linguistic category was closely connected with social and political developments: up to the year 409 it is consistently used in the inscriptions, after that year δύο is often construed with the

34) W.L. Graff, Language and languages, New York-London 1932, p. 198, who refers to K. Brugmann, Kurze vergl. Gramm., Strassburg 1903, § 527.
35) Ed. Schwyzer-A. Debrunner, Griechische Grammatik, II, München 1950, p. 48.
36) Brugmann, o.c., p. 455 and 457.

plural, after 386 most forms successively disappear [37]. The dual is found when referring to 1. natural pairs (χεῖρε), 2. entities which usually form pairs or couples (βόε, ἵππω); 3. pairs of brothers, sisters, friends (παῖδε, ἀδελφώ); 4. two persons or objects which, though being different, are always or often mentioned together or are brought into close union (τὼ θεώ "the two goddesses of Eleusis"). The number of words occurring in the dual is comparatively limited. As a rule they are not attended by the words δύο or ἄμφω [38].

The question may, however, arise whether any difference may be observed between ποδοῖν and δυοῖν ποδοῖν, υἱώ and δύο υἱώ etc. [39]. The answer appears to be that in the inscriptions δύο or the figure 2 is, in a natural way, often added to φιάλα "2 bowls", στεφάνω "2 crowns", χρυσίδε "2 vessels of gold" and similar words when occurring in lists among other objects of which one, three or more specimens are added. If we may rely upon the collection of the relevant texts given by Keck [40] the word δύο is preferentially added when the noun is not accompanied by the article or an adjective, the only exceptions mentioned being φιάλα ἀργυρᾶ δύο (C.I.A. I, 135,7) and λημνίσκω δύο χρυσώ (p.64 n.174,175) and the repeated ἥλω δύο ὑπαργύρω καταχρύσω. The numeral further often appears when amounts of money, definite distances etc. are referred to: δυοῖν δραχμαῖν; δυοῖν ὀβολοῖν; πλάτος δυοῖν ποδοῖν; these words were likewise often attended by other numerals. In the speeches of the Attic orators we also find δυοῖν ταλάντοιν etc. (e.g. Ant. 2 A 6) [41]; besides, they use the form δυοῖν in the frequent locutions of the type δυοῖν κακοῖν...θάτερον ἑλέσθαι, followed by a disjunctive ἤ ... ἤ "either - or" (e.g. Andoc. 2,7); here the addition of δυοῖν, no doubt under the influence of the constantly recurring δυοῖν θάτερον ἤ...ἤ "one of two things...either...or", emphatically introduces the alternative [42]. Sometimes the word is, likewise emphatically, used when a pair of entities denoted by a dual form is split up into its components: Ant. 3 B 12 ἀθλιωτάτω δύο πατέρα καὶ παῖδα; cf. also Lys. 16,14 δυοῖν ἀνδροῖν followed by ἑκατέρῳ "to each of them". If further turns up when the idea expressed by the dual form is specified by a set of answering clauses of the τοτὲ μὲν ... τοτὲ δέ type (Ant. 5,49 δύο λόγω ἔλεγε·τοτὲ μὲν ἔφη etc.; cf. 6,31) [43]. Or when, though referring

37) For particulars see: S. Keck, Ueber den Dual bei den griechischen Rednern mit Berücksichtigung der attischen Inschriften, Würzburg 1882 (not reliable in all respects, but of more value than some of the other XIXth century treatises on the Greek dual enumerated by Schwyzer o.c., I, p. 545 and II, p. 46); P. Doerwald, De duali numero in dialectis aeolicis et doricis, q.d., Thesis Rostock 1881; K. Meisterhans – E. Schwyzer, Grammatik der attischen Inschriften[3], Berlin 1900, p. 199 ff.; A. Cuny, Le nombre duel en grec, Thesis Paris 1906; J. Humbert, Syntaxe grecque, Paris 1945, p. 20 ff.; Schwyzer-Debrunner, o.c. II, p. 46 ff.

38) For details see Keck, o.c., p. 58 f.

39) The description given by Schwyzer-Debrunner, o.c., p. 47 f. does not appear to be completely adequate to the facts: "im bloszen Dual steht, was von Natur oder gewollt ein Paar bildet," and: "ebenfalls ererbt... ist der Gebrauch des Duals mit δύω (δύο) zur Bezeichnung einer zufälligen Zweiheit".

40) Keck, o.c., p. 11 f. and 44 f.

41) See, however, further on.

42) See Keck, o.c., p. 49.

43) See also further on.

to a pair, the numerical value is emphasized: Lys. 32, 20 εἰς ὄψον μὲν δυοῖν παιδίοιν καὶ ἀδελφῇ πέντε ὀβολοὺς τῆς ἡμέρας ἐλογίζετο; 24, 12 δυοῖν μίᾳ; Is. 6, 6; compare also Isocr. 12, 191 τοῖν δυοῖν πολέμοιν ... τοῦ τρίτου.

In the 4th century B.C. the plural rapidly encroaches upon the traditional domain of the dual. We then find the numeral accompanying not only plural nouns which were, as far was we know, not used in the corresponding dual turn (Ant. 5, 85 δύο ἀγῶνας; Lys. 12, 7 δύο πένητας; 13, 25 δύο πλοῖα etc.), but also those which supplanted older dual forms (Andoc. 1, 41 δύο... τάλαντα; 117 θυγατέρας δὲ δύο etc.). As has already been remarked by other scholars the gen.-dat. δυοῖν and ἀμφοῖν are as a rule [44] followed by the identical ending -οιν of the noun [45], the nom.-acc. δύο and ἄμφω, however, in a large majority of cases [46] by the plural form of the noun [47]. Yet this distribution may, to a certain extent, have been reinforced by another tendency: words indicating sums of money (ὀβολοί, μναῖ, τάλαντα), spaces of time (ἡμέραι, μῆνες, ἔτη) and μέρη "parts" in the phrase τὼ δύο μέρη are always put in the plural form [48]. In most cases the abstract sense of "two individual .." is apparent: Is. 4, 4 δύο πατέρας "two (different) fathers"; 7, 18 θυγατέρας δύο, ταύτην τε ἦ ... καὶ ἄλλην ἦν ...

From these facts it is sufficiently clear that the Attic dual was on the one hand conventional, and on the other dying. It would be unwarrantable to suppose this Attic usage to have been similar to the rôle played by this category in prehistoric Greek. The use Homer has made of the dual is generally, and correctly, called incoherent and inconsistent [49]. Yet Meillet is, to my mind, right in stating that "cette inconhérence n'empêche pas que le texte tel qu'il est conservé présente un bon nombre de particularités instructives pour l'histoire des formes de duel" [50] and it would even appear to be possible to add some remarks to the valuable observations made by this French savant. The verdict delivered by Cuny [51] can, indeed, be misleading: "Le duel se rencontre encore très fréquemment dans l'Iliade et dans l'Odyssée, mais il est peu de passages où l'on ne puisse le soupçonner d'être un archaïsme ou un expédient métrique". It must be conceded that a complete survey of all (nominal as well as verbal) dual forms necessarily leads us to conclude that the epic language which possessed the

44) In 76 of the 89 cases collected by Keck, o.c., p. 45 f.
45) See e.g. R. Kühner – B. Gerth, Ausführliche Grammatik der griechischen Sprache[3] I, Hannover 1898, p. 70 f.: Schwyzer-Debrunner, o.c., p. 49, n. 4. The forms δυοῖν and ἀμφοῖν have apparently 'dragged along' or 'conjured up' the -οιν form of the noun(s), because this ending is never used by the orators unless δυοῖν or ἀμφοῖν occupies the first place in the relevant phrase (type Lyc. 86 προσελθόντων δ' αὐτῷ δυοῖν ἀνδρῶν as against Andoc. 1, 20 δυοῖν τοῖν μεγίστοιν κακοῖν the rare type δυοῖν θυγατερῶν οὐσῶν first occurs Isae. 7, 11).
46) See e.g. Keck, l.c.
47) In 179 of the 195 cases enumerated by Keck o.c., p. 42 ff.
48) See above. For the exceptions see Keck, o.c., p. 44. Could δύ' ὀβολώ mean "twopence"? A coin of this value was struck: τὸ διώβολον "the double obol".
49) See e.g. Schwyzer-Debrunner, o.c., p. 47; Cuny, o.c., p. 487 ff; J. Wackernagel, Vorlesungen über Syntax, I[2], Basel 1926, p. 77 f.
50) A. Meillet, L'emploi du duel chez Homère et l'élimination de duel, in Mém. de la Soc. de Ling. de Paris, 22, Paris 1922, p. 145.
51) Cuny, o.c., p. 499.

dual was used by poets who were not acquainted with it in their own tongue. But there is in their poems hardly any instance of a dual where a plural was the proper form. It is a weak point in Cuny's argument that he should have almost entirely neglected the semantic aspect of the linguistic phenomenon which he discussed, and also omitted descending to such philological particulars as interpreting part of the relevant passages.

Returning now to the groups consisting of δύο (δύω) and a substantive, it would not be improper to remark that the cases in Homer in which this word is accompanied by a dual have a majority of only 2 or 3 [52]. Leaving out of account six cases in which the numeral is 22 or 52 there are 53 instances of δύο (δύω) + dual without a verb, 40 similar instances of δύο (δύω) + plural; 12 cases of the numeral + dual of the noun and of the verb; 21 similar cases of its being accompanied by a plural of both noun and verb; 6 instances of δύο (δύω) + dual of the noun and plural of the verb and 6 of this numeral + plural of the noun and dual of the verb [53]. Schwyzer-Debrunner [54] are right in remarking that the dual forms attended by the numeral mostly refer to living beings (κῆρε, δοῦρε, τελαμῶνε, λᾶε constituting exceptions); however, the same remark can be made in connection with the plural construction (about 3 : 2). The number of words occurring, accompanied by the numeral, in the dual is on the other hand much more limited than that appearing in the plural. We find, in the Iliad, the dual forms Αἴαντε, ἀνέρε, ἄρνε, Ἀτρεΐδα, δοῦρε, θεράποντε, κῆρε, κήρυκε, λέοντε, κύνε, παῖδε, λᾶε, τελαμῶνε, υἷε, φῶτε; in the Odyssey ἄνδρε, δοῦρε, παῖδε, and the remarkable τοκῆε. The following words are also used in the plural [55]: Αἴαντες, ἀνέρες, θεράποντες, κῆρυκες, υἷες, φῶτες in the Iliad, and ἄνδρες, κύνες, υἷες in the Odyssey. In addition to these δύο (δύω) accompanies the plural forms ἄχμονες, ἀμφίπολοι, ἄνεμοι, γενεαί, ἑταῖροι, ἡγήτορες, ἵπποι , κανόνες, μήστωρες, νομῆες, πόλεις, πτύχες, πυθμένες, σκοποί, τάλαντα, τρίποδες, φάρεα in the Iliad, and ἀμφίπολοι, ἄρτοι, ἀρχοί, ἀνάμινθοι, βοῦς, ἕρματα, ἕταροι, ἡμίονοι, θύραι, ἵπποι, κρῆναι, νομῆες, νύκτες, πόλιες, ποταμοί, προβλῆτες, σκόπελοι, φάσγανα in the Odyssey [56].

Now the comparatively small number of words which, being accompanied by the numeral, is exclusively used in the dual in the first place comprises some words the dual of which occurs elsewhere without δύο (δύω). Il. 3, 103 οἵσετε δ'ἄρν', ἕτερον λευκὸν ἑτέρην δὲ μέλαιναν, γῇ τε καὶ ἠελίῳ clearly shows that ἄρνε means "a pair of sheep, two sheep of either sex (to be offered to the two complementary divinities Earth and Sun)". Afterwards (117, 119) these sheep are referred to as ἄρνας [57] or ἄρνε. But 3, 246 δύω is added, not because here a "zufällige Zweiheit" [58] is denoted,

52) Schwyzer-Debrunner's statement (o.c., p. 49): "δύο (ist) bedeutend häufiger met dem Plural als mit dem Dual des Nomens verbunden" must be due to a slip of the pen.
53) I have based my calculation on H. Ebeling, Lexicon Homericum, Leipsic 1885. See also Cuny, o.c., p. 497.
54) o.c., p. 49.
55) Of course not only in the nominative.
56) Compare also βοῦς as against βόε H. Merc. 405. Perhaps some word or other has erroneously been omitted in the above lists.
57) "Pour bien marquer l'accusatif", Meillet, o.c., p. 150.
58) Schwyzer-Debrunner, o.c., p. 48.

but to recall and to emphasize, in returning to this subject, the idea expressed by the dual ending: instead of using the term ἄρνε alone the poet now specifies: ὅρκια πιστά, ἄρνε δύω καὶ οἶνον εὔφρονα, in which the numeral at the same time serves to counterbalance the long οἶνον εὔφρονα. Nor does δύο δοῦρε, the pair of spears of the Homeric hero (without the numeral e.g. Il. 5, 495; 13, 241), refer to any set of two spears or to a casual group of two spears out of the hundreds of spears existing. The remarkable frequency of this phrase may, on the one hand, be due to its being forged together by alliteration, and, on the other hand, to the character of the passages in which it occurs: Od. 1, 256 and often elsewhere a complete suit of armour is described: σταίη ἔχων πήληκα καὶ ἀσπίδα καὶ δύο δοῦρε (and other enumerations of the same character); 16,295 the numeral may be regarded as appearing under the influence of the context: νῶιν δ'οἵοισιν δύο φάσγανα καὶ δύο δοῦρε / καλλιπέειν καὶ δοιὰ βοάγρια... It would appear to me that for the poet the addition of δύο is a means of dwelling upon the completeness of this part of the armour (cf. also Il. 11, 43). Elsewhere the numeral apparently serves to emphasize the community of action or of experience of the pair of persons concerned: Il. 5,608 ἔνθ' Ἕκτωρ δύο φῶτε κατέκτανεν... εἰν ἑνὶ δίφρῳ ἑόντε, Μενέσθην Ἀγχιάλόν τε; 572; cf. 19,47 [59]); 12,421; 16,218 δυ' ἀνέρε... ἕνα θυμὸν ἔχοντες. Why is the well-known pair of lions five times λέοντε δύο and Il. 16,756 λέοντε? Is it because in the former passages the word δύω (Il. 5,554 οἵω τώ γε λέοντε δύω; cf. also 13,98) adds to the deictic or anaphorical character and the large wording of the descriptions or similes and helps to emphasize the parallelism between the lions and the heroes to which they are compared?

"Les formes du duel," Meillet observes [60]), "ne servent donc pas la plupart du temps dans le cas où il s'agit notoirement de deux. Le poète y recourt bien plutôt pour attirer l'attention sur le fait qu'il s'agit de deux [61]). Le duel a une valeur expressive là où il n'est pas purement traditionnel. Si les "tendons" sont nommés au duel, τένοντε, c'est pour bien indiquer qu'il s'agit de "deux tendons", ainsi X 396." Would it be too bold a conclusion tó say that the addition of δύο (δύω), in its turn, emphasizes the expressive element in the function of the dual form? The words for 'two-sons' υἷε and παῖδε are often accompanied by the numeral, not only in the sense of "two (of the many) sons (of Priamos etc.)" (Il. 12,95 Ἕλενος καὶ Δηίφοβος θεοειδής, υἷε δύω Πριάμοιο), but also when the two sons of one and the same mother (Od. 11,262 (Ἀντιόπη)... ἣ... ἔτεκεν δύο παῖδ' Ἀμφίονά τε Ζῆθόν τε; 307) or of the same father (Il. 2,679 Φ. τε καὶ Ἀ., Θεσσαλοῦ υἷε δύω) are referred to. Side by side with Il. 2,864 ff. Μ. τε καὶ Ἀ., υἱε Ταλαιμένεος, τὼ.... we find 831 Ἀ. τε καὶ Ἀ..., υἷε δύω Μέροπος.. Both heroes, Thessalos and Merops, had as far as we know two sons.

59) Il. 17,377 δύο δ'οὔ πω φῶτε πεπύσθην where the idea of "two" is expressed, has often been considered an interpolation, see the commentaries by Faesi-Franke[5], Berlin 1876, and K.F. Ameis-C. Hentze, Anhang zu Homers Ilias, Leipsic 1900, VI, p. 78 f.

60) Meillet, o.c., p. 152 f.

61) I.e. a group or set of two.

Here δύω meaning something like "the (complete) pair of them" is almost equivalent to "both".

It is true that in most cases the number of persons or objects denoted by the noun is not limited to two. Yet in other cases of the same nature the numeral is not added. Why is the "team of horses" (or "the chariot itself with the horses") in contradistinction to the pair of spears, called ἵππω and not ἵππω + δύω when put in the dual? Has the occurrence of other attributes anything to do with it, the horses often being καλλίτριχε etc. and the spears in most cases δύω δοῦρε? Although I would like to avoid laying too much stress on this point I cannot resist the temptation to observe that cases of a dual form + δύο (δύω) and another attribute are far from frequent in Homer: apart from δύω Αἴαντε κορυστά; (Il. 13,201; 18,163) [62] we come across Il. 11,43 and Od. 22,125 ἄλκιμα δοῦρε δύω κεκορυθμένα χαλκῷ (cf. 3,18); Il. 13,345 δύω Κρόνου υἷε κραταιώ; cf. also Il. 10,360; 23,329. In some particular cases we might perhaps be justified in concluding that rhythmical reasons led the poet to add the numeral: Od. 1,256 σταίη ἔχων πήληκα καὶ ἀσπίδα καὶ δύο δοῦρε; 18,377; 22,101 and Il. 10,76 may be regarded as instances of the so-called 'Gesetz der wachsenden Glieder' [63]; sometimes general rhythmical factors, usually referred to as 'the necessity of filling up the verse', may be held responsible: Il. 2, 731; also 23, 329?

Occasionally the occurrence of the word δύο (δύω) seems to be due to the desire of the poet of contrasting the pair of persons or objects qualified by it with a single entity: Il. 5,303 ὃ δὲ χερμάδιον λάβε χειρί .. ὃ οὐ δύο γ' ἄνδρε φέροιεν; 20,286; 12, 447; 18, 163; the numeral is likewise used in an enumeration: Il. 2, 406 Νέστορα μὲν πρώτιστα καὶ Ἰ. .... ἔπειτ' Αἴαντε δύω καὶ..., ἕκτον δ' αὖτ' Ὀδυσῆα...; 5,519; 6,436 (here the dual emphasizes the idea of pair or group, the numeral places it against the other members of the enumeration which are single [64]) or in two parallel sentences: Il. 13,201 ὣς τε δύ' αἶγα λέοντε... ὣς ῥα τὸν... δύω Αἴαντε κορυστά; otherwise 12,335. May we attach any importance to the fact that Ἀτρεΐδα δὲ μάλιστα δύω (Il. 1,16; 375) is preceded by πάντας Ἀχαιούς? [65]

Turning now to the passages in which Homer connects the numeral with a plural form of the noun, it first and foremost strikes us that in a comparatively large number of cases the group containing the word for "two" is opposed to, or put beside, other numerals: Il. 20,269;271 ἀλλὰ δύω μὲν ἔλασσε διὰ πτύχας, αἱ δ' ἄρ' ἔτι τρεῖς/ἦσαν, ἐπεὶ πέντε πτύχας ἤλασε κυλλοποδίων, τὰς δύο ... δύο δὲ ... τὴν δὲ μίαν...; 24,233 ἐκ δὲ δύ' αἴθωνας τρίποδας, πίσυρας δὲ λέβητας, Od. 6,63; 5,388; 8,60; 9,74; 10,142; 4,128; Il. 1,250; 11,

62) Cf. e.g. Wackernagel, Vorlesungen über Syntax^2, I, Basel 1926, p. 82.

63) Which, of course, is properly speaking not a law but a tendency. See O. Behaghel, in the Berliner philologische Wochenschrift 1919, p. 193 ff.; W. Havers, Handbuch der erklärenden Syntax, p. 178 and 262.

64) See also O. Hoffmann, in Bezzenbergers Beiträge 25, p. 165 f.

65) For the form Ἀτρεΐδα see especially Wackernagel, Sprachliche Untersuchungen zu Homer, Göttingen 1916, p. 57. As the post-Homeric poets always wrote Ἀτρεΐδαι and often added the adjectives διπλοῖ, δίωσοι, and δικρατεῖς (but Aesch. Ag. 122 δύο ... Ἀτρείδας) which are, as a rule, followed by the plural of the noun one might be tempted to ask oneself whether the dual form has something to do with the word δύω which is added in Iliad 1,16; 375.

635. Od. 5,484 ἠὲ δύω ἠὲ τρεῖς ἄνδρας; 12,154: ἕνα ... δύ' οἵους; Il. 10, 153 τῶν δύο μοιράων, τριτάτη δὲ; H. Cer. 400; 447; 465; cf. also Il. 11,748. Here the persons or objects concerned are not conceived as pairs or groups-of-two, but as separate or individual entities: two, or even any given two, out of a larger number. Elsewhere two other persons are mentioned beside a single man or woman: Od. 1,331; 2,11; 18,207; Il. 24,573: οὐκ οἷος· ἅμα τῷ γε δύω... Or the two entities concerned appear before and after a noun in the singular number: Il. 8,290 ἢ τρίποδ' ἠὲ δύω ἵππους ... ἠὲ γυναῖκα ...; Od. 15,85. In a similar way we come across (Od. 18,292 ff.) ἕνεικε ... πέπλον, ὅρμον ... ἔνεικεν ..., ἕρματα ... δύω... ἔνεικαν ..., ἴσθμιον ἤνεικεν ... Elsewhere the poet refers to two distinct beings or objects: Od. 10,515 ξύνεσίς τε δύω ποταμῶν; Od. 13,97; 16,295; cf. also 6,18; 15,412 (cf. Il. 15,187 ff.); the two objects are often specified: Od. 7,129 δύω κρῆναι, ἡ μὲν ..., ἡ δ' ἑτέρωθεν; 12,73; 13,109; Il. 18,490; 498; 12,127. Two men who are not otherwise connected, Aeneas and Idomeneus, are introduced as δύο δ' ἄνδρες (Il. 13,499); in a similar way: Il. 8,332 and 13,421; Od. 4,496. Compare also Od. 3,424 πάντας ... ἀγέτω, λιπέτω δε δύ' οἵους. When counting two talents of gold Homer always has δύω χρυσοῖο τάλαντα (Il. 18,507; 23,269; 614, like δέκα ... τάλαντα 19,247 etc.).

The avoidance of the dual number after the word δύο (δύω) may, however, not always be due to the above motives. Reasons of versification may have made their influence felt: Il. 3,116 δύω κήρυκας ἔπεμπεν; 12,313 Αἴαντές τε δύω (cf. 126 ἀμφὶ δ' ἄρ' Αἴαντας δοιούς; 7,164; 8,70).

Although we are aware of the risk of laying too much stress on the difference between the categories, δύο (δύω) with the dual and δύο (δύω) with the plural, we may, generally speaking, be justified in concluding that the Homeric facts reflect a linguistic usage, according to which the dual number accompanied by the 'numeral' was preferred when the idea of a complete group of two was emphasized. Δύο (δύω) with the plural, on the other hand, expressed the idea of two distinct or individual entities in the same way as τρεῖς and the other numerals applied to three or more separate beings or objects which formed part of an analysed or analysable plurality. As is always the case with linguistic phenomena of this description – we cannot do better than recall the fluctuations in the use of the verb when accompanying collectives in English – there was ample scope for an individual way of taking the idea expressed by the 'numeral two' [66]: showing the double-sidedness of all collectives it could refer to a unit, but also to a plurality in the same way as the higher numerals and countables in general. The opinion expressed by Cuny [67] that part of the dual forms occurring in the Iliad without being combined with a plural concerns traditional formulas, must be regarded as correct. We can, to my mind, also explain the preponderance of the δύο (δύω) + dual construction in this epic (55 instances) as

66) Compare such instances as Il. 18, 523;525; Od. 17,214. We must however also take into consideration the relative frequency of the dual form in the various nominal classes; see e.g. B.I. Wheeler, Indog. Forsch. 6, p. 135 ff.

67) Cuny, o.c., p. 493.

compared with the Odyssey (15 instances) from the more pronounced archaic character of its wording and language in general. However, the difference cannot exclusively be reduced to chronological factors. The more 'modern' mental attitude and state of civilization in the Odyssey were no doubt influential in the selection made by the poet from the possibilities presented to him by his language.

It is a remarkable fact – and presumably more than a mere coincidence – that the Attic dialect which was also very consistent in connecting the originally collective α-plural (the so-called neuter plural) with the singular form of the verb, should have preserved the dual number for so long a period. It is in this connection worth mentioning that these authors who wrote under the more or less strongly marked influence of the great epics seem to have availed themselves, to a certain extent, of the co-existence of both constructions under discussion [68]. Although the choice made can largely depend on the nominal class to which the word used belongs, it cannot be due to mere chance that Soph. El. 701, after εἷς ... εἷς, should have written δύο Λίβυες (cf. Trach. 539), and Eurip. Hel. 571 οὐ μὴν γυναικῶν γ' εἷς δυοῖν ἔφυν πόσις [69]. As to Bacch. 918 καὶ μὴν δρᾶν μοι δύο μὲν ἡλίους δοκῶ Cuny is [70] no doubt right in remarking: "comme le mot, de par son sens, n'est jamais employé au duel, le pluriel était presque inévitable. Le duel eût fourni un sens ridicule: "une paire de soleils"." The remarkable fem. dual in -ᾱ Eur. El. 1033 [71] is, on the other hand, explicitly used in connection with a pair of women characterized by the same experiences: καὶ νύμφα δύο / ἐν τοῖσιν αὐτοῖς δώμασιν κατεῖχ' ὁμοῦ; and ibid. 1063 δύο δ'ἔφυτε συγγόνω / ἄμφω ματαίω ... the dual likewise was, for the poet, a means of expressing himself in a synthetic way. A curious passage is Alc. 900 ff. δύο δ' ἀντὶ μιᾶς Ἄιδης ψυχὰς (the dual of ᾱ-stems is rare [72]) ... σὺν ἂν ἔσχεν, ὁμοῦ χθονίαν λίμνην διαβάντε; have the words σύν and ὁμοῦ "together" 'conjured up' the dual?

It would be out of place here to discuss these constructions in all relevant passages in the ancient Greek authors. Let it suffice to draw attention to the interesting fact that Thucydides very often writes the plural form after δύο in counting, dividing or measuring or when the idea of two is opposed to, or mentioned beside, other numbers: 1,10,2 τῶν πέντε τὰς δύο μοίρας; 74,1; 104, 2; 134,4; 2,65,6; 3,15,1; 87,2; 4,16,1; 122,6; 5,49,1; 6,104,1, 7,27,5; 50,2 etc.; further, in connection with two entities which are represented as distinct: 2,76,4; 3,6,1; 21,1; 90,2; 4,43,1; 87,3; 113,2; 5,4,1; 7,45,1 etc,; likewise when the numeral is used in an antithetic-distributive way: 2,95,1 δύο ... τὴν μὲν... τὴν δὲ ...; 3,57,3 δύο ἀγῶνας... τότε μὲν..., νῦν δὲ ... The same

68) Cf. E. Hasse, Ueber den Dual bei den griechischen Dramatikern, Programma Bartenstein 1891, esp. p. 17 ff.; Cuny, o.c., p. 150 ff. who discusses the distribution of the dual and plural forms over the nominal classes.
69) See Cuny, o.c., p. 151.
70) Cuny, o.c., p. 154.
71) Cuny, o.c., p. 140 and 154.
72) See also Meillet, o.c., p. 146, and Wackernagel, Sprachl. Unters. p. 56.

author, on the other hand, preferred the dual 3,51,3 δύο πύργω προέχοντε; 112, 1 ἐστὸν δὲ δύο λόφω ἡ 'Ιδομενὴ ὑψηλώ etc.

We shall not leave this subject without observing that the words for the so-called natural pairs (type ὄσσε "the eyes") are not accompanied by δύο (δύω) [73].

It is reasonable to assume that these facts, which of course make no claim to completeness or finality, can help us to deepen our insight into the prehistoric function of the 'numeral' *duō[u]*.

Let us now turn to the use of *duō[u]* in Ancient Indian. "Durch *dvau* mit dem Dual," Delbrück [74] says, "wird die Zweizahl aus der Zahlenreihe hervorgehoben." In some of the instances adduced by the same author this function of *dvau* is evident: RV. 2,18,4 *ā dvābhyāṃ háribhyām indra yāhy ā́ catúrbhiḥ*, etc., but I cannot agree with him that exceptions "might be rare" [75]. In the well-known verse RV. 1,164,20 *dvā́ suparṇā́ sayújā sákhāyā* etc. (= AV. 9,9,20a; ŚvetUp. 4,6; MuṇḍUp. 3,1,1a) the word *dvau*, though directing the attention to two birds out of all birds, emphasizes the belonging together, the forming unity, the community of experience of both components of a twofold entity; in 1,191,1 *kā́ṅkato ná káṅkato 'tho satīnákaṅkataḥ / dvā́v íti plúṣī iti...*, translated by Geldner [76]: "Der K., nicht der (eigentliche) K. und der echte K., diese beiden meine ich, die P. heiszen", *dvau* is practically synonymous with *ubhau*; in a similar way: 4,30,19; 5,62,6 *rā́jānā kṣatrā́ṃ bibhṛthaḥ sahá dvā́u* was commented upon by Delbrück [77]: "hier ist der Nachdruck darauf gelegt, dass nicht ein Herrscher da ist, wie zu erwarten wäre, sondern zwei"; the words *saha*, however, expressing the idea of "conjointly, in concert, in company", *dvau* does not, as far as I see, oppose "two" to "one"; it emphasizes the completeness of the pair, not the co-existence of two completely distinct divinities. Mitra and Varuṇa, who are the *rājānau* referred to, are closely associated, and the attribute of sovereignty is mostly appropriated to them conjointly [78]; Mitra has practically no real independence of character, 6,67,1 they are called *dvā janā* (*dvau: sahitau* "united", Sāyaṇa); 8,29,9 they are simply referred to by *dvā́... divíṃ samrā́jā* (*dvā* = *dvau Mitrā-Varuṇau*, Sāyaṇa). 9,86,42 and 1,131,3 the same phrase is used in connection with other complementary pairs. 10,88,16 *dvé samīcī́ bibhṛtaś cárantam* (= *saṃgate dyāvāpṛthivyau gacchantaṃ dhārayataḥ*, Sāyaṇa) the addition of *samīcī́* "combined, united", but also "complete, entire, whole" sheds light on the character of "two". In 1,28,2 *yátra dvā́v iva jaghánādhiṣavaṇyā́ kṛtā́* the dual does not refer, as Delbrück holds, to "zwei Schenkel (oder besser zwei Schenkelpaare)", but to a pair of (male and female) pudenda. An interesting passage is 1,144,3-4: here *yúyūṣataḥ sávayasā́* is ta-

73) We may do well to recall such instructive passages as Xen. Anab. 1, 1,1 Δαρείου ... γίγνονται παῖδες δύο ... ἐβούλετό οἱ τὼ παῖδε ἀμφοτέρω παρεῖναι (anaphorical dual; for ἀμφοτέρω see Debrunner, Glotta 15, p. 21 ff.). Wheeler, o.c., expressed himself in this way: "(The) primitive value (of the IE dual) was 'ambal' rather than dual".

74) B. Delbrück, Altindische Syntax, Halle a. S. 1888, p. 99.

75) Delbrück, o.c., p. 100.

76) K.F. Geldner, Der Rigveda I, Göttingen-Leipsic 1923, p. 245.

77) Delbrück, o.c., p. 100.

78) The reader might be referred to A.A. Macdonell, Vedic Mythology, Strassburg 1897, p. 22 ff.; A.B. Keith, The Religion and Philosophy of the Veda and the Upanishads, Cambridge Mass. 1925, p. 96 ff.; H. Lüders, Varuna I, Göttingen 1951, p. 37.

ken up by *yám īṃ dvā́ sávayasā saparyátaḥ samāné yónā mithunā́ sámokasā*: although the purport of the text is open to discussion [79], it is perfectly clear that *dvau* does not emphasize the idea of two in contradistinction to another abstract number, but the completeness of the pair: "den die beiden Gleichaltrigen pflegen, das in gemeinsamem Schosze beisammen wohnende Paar" (Geldner). 10,17,2 was already considered an exception to the rule by Delbrück himself [80]: here the two Aśvins, the well-known divine pair, are said to be the twin sons of Vivasvat and Saraṇyū and called *dvā́ mithunā́*: "nicht zwei Paare, sondern zwei ein Paar bildende" (Pet. Dict. [81]). 1,95,1 the complementary pair of day and night is styled *dvé vírūpe* "the pair of different colour" which is followed by *anyānyā́* and *anya- ... anya- ...*; cf. 5,47,5 and 10,137,2.

It may be of some use to add the following survey of more or less remarkable passages in the Atharvaveda, the brāhmaṇas and later literature. AV. 10,4,8 "in this field are two snakes, both a female and a male" (Whitney-Lanman): *dvāv ahī ... ubhau*; whereas the constellation Aśvayuj which consisting of two stars is often referred to as Aśvayujau is 19,7,5 called by this very dual, two co-operating winds which are specified by *anya- ... anya-*, are however, termed *dvā́v imáu vā́tau* (4,13,2).

Although in the brāhmaṇas and upaniṣads *dvau* is often used as a 'modern numeral' – and this function is in a natural way especially clear when it is opposed to, or mentioned side by side with, other numerals – cases are not wanting in which it may, from the point of view of 'logic', be considered superfluous, the object under discussion being twofold or consisting of two entities, or in which it is otherwise indicative of a tendency to put entities into groups or to resort to collective expressions: ŚatBr. 11,2,3,3 *tad dvābhyām eva pratyavaid rūpeṇa caiva nāmnā* [82]; 5,4,15 *dvau vā́ imau prāṇau prāṇodānau*; 1,2,4,2; cf. also 2,2,2,6; 3,4,9 and similar texts; ŚvetUp. 5,1 *dve... brahmapure... vidyāvidye nihite* "in Brahman's town are two things: knowledge and ignorance". Compare also such locutions as ŚatBr. 3,8,4,10 *tad vā́ etad eko dvābhyaṃ vaṣaṭkaroti, adhvaryave ca yáś ca...* The construction *dvau* followed by *anya-... anya-* is also found 5,1,2,15; 1,7,2,10; *dvau... tayor yataraḥ* 4,5,8,13. Cf. also 12,5,1,5. Complementary pairs may be introduced by this numeral: 12,7,3,7 *dvau vāva lokāv ity āhur devalokáś caiva pitṛlokáś ceti*. Two oxen belonging to the same category and having the same function are referred to by *dvau* 5,5,2,3. MundUp. 1,1,4 *dve vidye... parā́ caivāparā́ ca* "two kinds of knowledge (wisdom) a higher and also a lower". Cf. also B.ār.Up. 2,3,1. Either by usage or by the character of the discussions and explications in these texts the numeral is repeatedly used in connection with two persons or entities which are said to undergo the same vicissitudes, 6,1,1,3. Words for persons or objects which belong together or form part of the same category are,

79) According to Sāyaṇa the pair of beings called "equal in age" are the hotar and the adhvaryu, according to Geldner, o.c., p. 183 the two arms when producing fire.

80) Delbrück, o.c., p. 101.

81) Petrograd Dict. V, 777, l. 3, following the explanation given in the Nirukta, 12, 10.

82) For the nāma-rūpa conception see M. Falk, Nāma-rūpa and dharma-rūpa Calcutta 1943, p. 1 ff.

also when appearing in an enumeration, often put in the dual and introduced by *dvau*. 5,4,3,17 *catvāro 'śvā rathaḥ pañcamo dvau savyaṣṭhṛsārathī te sapta*; 8,4,1,16; 7,5,1,25; 4,5,8,13; 5,5,4,21; B.ārUp. 6,2,2. Sometimes the word *dvau* is used in such a way as to supply the word for a well-known pair: ŚatBr. 3,5,4,1 with *imau* for the ears and nostrils; PañcBr. 20,15,5 *mithunaṃ dve sambhavataḥ (dvè: strīpuruṣaśarīre* comm.). The idea of two is connected with "on both sides, both ways" (*ubhayataḥ*) ŚatBr. 2,5,2,5. 4,2,4,1 *tau ha smaitau dvāv... grahau* may be translated "these two grahas" or "both these grahas".

Sanskrit authors continue using the numeral 'two' in this way: MBh. 1,31,34 *janayāmāsa putrau dvāv Aruṇaṃ Garuḍaṃ tathā*; Hariv. 601 *Nāsatyaś caiva Dasraś ca smṛtau dvāv aśvināv iti* (the Aśvins being a well-known pair of divine twins); Kathās. 6,162 *mama rājñaś ca viṣādapramadau dvayoḥ / abhūtām* "the king was delighted and I was despondent". Cf. also Kāśyapa-saṃhitā (a Vaikhānasīya text), p. 147 *dakṣiṇāvāmayoḥ cakraśaṅkhau dvau cāmarāv upari chatram...*; Mbh. 3,298 (= Śāvitrī 6), 39 five wishes or boons are enumerated but two of them which have a bearing upon one and the same person are first specified and then resumed by means of *dvau*: *cakṣusī ca svarājyaṃ ca dvau varau śvaśurasya me*. In a similar way Pañc. 1,9 *Anāgatavidhātā ca Pratyutpannamatis tathā dvāv etau sukham edhete* "Freund Vorbedacht, Freund Zeitgemäss – gar glücklich geht's den beiden" [83]; 1,11 *Dharmabuddhiḥ Kubuddhiś ca dvāv etau viditau mama*; 12 *tau dvāv api... prahṛṣṭau... prasthitau* "that set (to wit the friends "Virtuous-Mind" and "Wicked-Mind") being very glad, set out", and in the same tale the same friends are repeatedly referred to by *dvāv api: dvāv api tau svagṛhaṃ gatvā* "both of them went away, each to his own house"; *evaṃ tau dvāv api vivadamānau dharmādhikāriṇaṃ gatavantau* "thus that set disputed one with the other and went to the magistrate", and in a similar way elsewhere; in the same tale *dvābhyām asmābhiḥ saha tatra ... gantavyam* means "both of you must with us go to that place" (*dvābhyām = yuvābhyām*). The word sometimes expresses the sense of "both" in opposition to "one of them two": Pañc. 1,10 ... *svāmyamātyayor ekatamasya kiṃ vā dvayor api vinipātaḥ* "Unheil über dem Herrn oder über seinem Minister oder gar über beiden" (Liebich [84]) literally "a calamity... (impending over) one of the two, to wit the lord or the minister or over both of them". That the number two could easily be conceived as representing unity-in-duality, appears for instance from the narrative told in the Kathās. 5,8 ff. where a hand the five fingers of which are closely pressed together suggests the idea of five men being united, and two extended fingers (of one and the same hand of course) that of 'union is strength' in case of two persons [85].

In emotional passages a logically superfluous 'two' in the sense of "both" is, of course, easily apt to turn up: Plautus, M. Glor. 290 *edepol vidi :: tutin'? :: egomet, duobus hisce oculis meis*. We are inclined to ask ourselves whether a similar use has, in

83) B. Liebich, Sanskrit-Lesebuch, Leipsic 1905, p. 158.
84) Liebich, o.c., p. 171.
85) For *dvau* and dual forms see also the very short remarks made by J.S. Speyer, Vedische und Sanskrit-Syntax, Strassburg 1896, p. 4, and L. Renou, Grammaire sanscrite, Paris 1930, p. 274.

Breton (a language which has otherwise preserved collectives) and other Celtic idioms, given rise to the curious inseparable combinations of "two" and a noun denoting those limbs and organs which occur in pairs: Bret. *daou-lagad* "the eyes" (this form being the only 'plural' of "eye" apart from *daou-lagad-ou* for the eyes of a plurality of persons); *diou-skouarn* "the ears" etc. [86]. At the root of this Celtic development (cf., e.g., Ir. *dí gualann* "the shoulders"; *dí láim* "the hands") was, again, *duō[u]* in a sense like "both", not in the meaning of the abstract "two".

It would therefore appear to me that there is some evidence for assuming that IE *duō[u]* in its earliest use approachable by our linguistic methods did not express the abstract idea of "two" as admitted in the intellectual and scientific thought of modern man, but had a function comparable to (but not identical with) the likewise ancient word represented by Greek ἄμφω, Anc.Ind. *ubhau* "both", or, to express myself otherwise: that it in its particular way stood for "the one as well as the other of a set of two, of an ensemble", that it was a means of referring to the completeness of the pair or group-of-two, of expressing the unity of two [87].

In the Attic dialect of Greek the word ἄμφω is consistently construed with the dual of the noun [88]. In the Homeric poems it occurs 32 times (Il. 25; Od. 7) with the dual, and 15 times (Il. 6; Od. 9) with the plural [89]. However, these figures also include those cases in which ἄμφω is attended by a dual form of a verb. The instances which have a bearing upon our subject are mainly confined to terms for those limbs and parts of the body which naturally exist in pairs: Od. 17,302 οὔατα κάββαλεν (subj.: a dog) ἄμφω; 5,453 ἄμφω γούνατ' ἔκαμψεν; 16,15 ἄμφω φάεα καλά. Here the question arises why these words should, in contradistinction to ὄσσε "the two eyes", and πήχεε "the forearms", occur in the singular and in the so-called plural. As Homer adds, to ὄσσε, the adjective in the plural and the verb in the singular (Il. 13, 435 ὄσσε φαεινά; 12,466 πυρὶ δ' ὄσσε δεδήει), and as, moreover, an *a*-plural of the adjective attends the dual form of a noun (e.g. 3,18 δοῦρε δύω κεκορυθμένα χαλκῷ) also in other cases [90], we may conclude that at least in these phrases and groups of words the originally collective *a*-plural which, as is well-known, has often preserved its ancient character, and the likewise essentially collective dual form were regarded as equivalent to such a degree that they could syntactically agree. The construction of ὄσσε with a singular form of a verb likewise points to the word's being put on a par with an *a*-plural. It is therefore not surprising that ἄμφω, which expressed or implied the idea of "being on, relating

86) H. Pedersen, Vergl. Gramm. d. Kelt. Spr. II, p. 70 f.; J. Vendryes, Sur le nombre duel (Choix d'Etudes), p. 99 f. "Ainsi après que le vieux duel indo-européen eut disparu des dialectes celtiques, chacun d'eux s'est créé un nouveau duel par l'emploi du nom de nombre lorsqu' il s'agit de désigner les organes qui vont par paire".

87) For "both" see, inter alia, O. Behaghel, Deutsche Syntax I, Heidelberg 1923, p. 433 ff.; New Oxford Dictionary, s.v. *both*.

88) I refer to Cuny, o.c., pp. 160; 244; 359.

89) See also W. Ohler, Über den Gebrauch des Duals bei Homer, Programm des Gr. Gymn. zu Mainz, Mainz 1884, esp. p. 9 ff.

90) Schwyzer, o.c., II, p. 50 "bei δοῦρε und ὄσσε steht im Epos fast nur pluralisches Adjektiv".

to, both sides" should agree with οὔατα and γούνατα which express 'collectivity-of-two' [91]. We further find Od. 8,135 μηρούς τε κνήμας τε καὶ ἄμφω χεῖρας ὕπερθεν: after two names of limbs in the plural which clearly represent 'dual ideas'; cf. also 20,365 εἰνί μοι ὀφθαλμοί τε καὶ οὔατα καὶ πόδες ἄμφω, and Il. 16,348. In an anaphorical construction ἄμφω + a dual form occurs Od. 11,301 Κάστορα...καὶ...Πολυδεύκεα, τοὺς ἄμφω ζωοὺς κατέχει φυσίζοος αἶα. The word for "both" has in a natural way not experienced the shift of meaning undergone by δύω.

As regards the use of the corresponding term, to wit *ubhau*, in the ancient Indian literature [92]: it is sometimes more or less anaphorical, e.g. AthV. 5,30,2 ff. *unmocanapramocane, ubhe vācā vadāmi te*; 8,4,13 = ṚV. 7,104,13; AthV. 9,3,9; "the one as well as the other"; ṚV. 1,120,12. After the names of two intimately associated gods: 11,2,14 "Bhava-and-Rudra (*Bhavārudrau*), allied, in concord, both go..."; 8,2,15 Sun and Moon; 3,20,1 Indra and Vāyu; it is our "both" referring to two, and no more than two, objects of the same class: AthV. 13,2,6 "both borders". In an enumeration *ubhau* can accompany the names of a pair of gods without, however, asserting their greater importance: AthV. 3,4,4 "the Aśvins, *Mitrāvaruṇobhā*, the *Viśve devāḥ*, the Maruts"; ṚV. 1,111,4; 10,125,1 (Mitra and Varuṇa and the Aśvins attended by *ubhau*, Indra and Agni are left without it). Rhythmical and metrical factors may have played a rôle, but some names have a predilection for it: the Aśvins (cf. also ṚV. 10,128,7; AthV. 5,25,3, cf. ṚV. 10,184,2 *devau* instead of *ubhau*); *Dyāvāpṛthivī* (e.g. AthV. 8,5,3); *Rodasī* "heaven and earth" (ṚV. 1,10,8; 33,9; 54,2), but even in these cases the word is not always added. Occupying the first place of the clause or verse it emphasizes association, joint action etc. AthV. 12,4,17; 4,32,7; ṚV. 6,69,8; 1,95,5; 6; 133,1; 3,54,15; in a similar way, but at the same time in opposition to a third entity: AthV. 6,89,3; repeated (anaphora) ṚV. 1,46,15; 6,60,13. It can attract attention to the fact than both members of a pair are involved or concerned in what is stated in the context: ṚV. 10,166,3; AthV. 7,70,4 "turned away are both thine arms". Elsewhere it serves as an introduction to the dual subject: ṚV. 1,22, 2 *ubhā devā... / aśvinā*; AthV. 6,19,3; 7,56,8. In a similar way ChāndUp. 8,8,4 *ubhau lokāv āpnoti imaṃ ca amuṃ ca*, where the idea of "both; the one as well as the other" is emphasized. In the above and many other cases the complementary character of two units is as a rule given special prominence. Compare also ChāndUp. 1,1,10 *ubhau... yaś ca... veda yaś ca na veda*; 7,7; *ubhayam* 3,18, 2; 7,12,1; 8,1,3; 3,5; 6,2.

In later texts the tendency to emphasize the belonging together of the two components of a pair or couple is very often found. In the Mahābhārata such turns as 7,51,9 *tāv ubhau prativakṣyāmo Hṛṣīkeśa-Dhanaṃjayau* "... to H. and Dh., i.e. Kṛṣṇa and Arjuna (who are often mentioned together)" are not rare: 1,50,41; 3,194,7; 5, 137,13 (*Mādrīputrau*); 12,266,13 (parents); 13,70,13; 18,4,5; 5,1 (*Virāṭa-Drupadau cobhau*). 5,129,31 we find in a simile ("like two

91) As is well known the dual form of the word "ear" appears in Avestan: *uši* and OChSl.: *uši*.
92) See already Wackernagel, AltInd. Gramm. II,1, p. 160 and 162.

fishes caught in a net... are desire and wrath") *jālena jhaṣāv apihitāv ubhau*, although these fishes were not yet known to the reader; 14,19,4 *jīvitaṃ maraṇaṃ cobhe*; 4,13,9 ff. *ubhau* three times in connection with a pair of fighting men. 1,23,2 Kadrū and Vinatā *tam hayaśreṣṭhaṃ dadṛśāte... kālavālam ubhe tadā*; 29,15 in connection with a pair of beings who have already been referred to: *yatpramāṇau ca tāv ubhau*; cf. 25,31; 30,30 these beings, a tortoise and an elephant, are devoured by Garuḍa: *bhakṣayāmāsa G. tāv ubhau gajakacchapau*. In the Rāmāyaṇa 2,67,7 the names of Daśaratha who is dead, and Rāma and Lakṣmaṇa, who are absent, are enumerated, followed by *ubhau Bharata-Śatrughnau*, the two other brothers (who were each other's half-brothers); here *ubhau* + dvandva compound has the same force as a "Bh. as well as Ś." construction; cf. also 2,34,20; 37,5 *khanitrapiṭake cobhe*; and further also 2, 9,44; 32,13; 4,12,19. Some instances taken from other works may be added to the above: Aśv. Saund. 4,10 Nanda and his wife *bhāvānuraktau... tau kiṃnarīkiṃpuruṣāv ivobhau/cikrīḍatuḥ* "they both sported (or, rather, they were a sporting pair) like a kiṃpuruṣa and a kiṃnarī (or, rather a pair of kiṃnaras)... in loving devotion"; Āryaśūra, Jātakam. 13, st. 20 *yac cobhayor ity ahitāvahaṃ syāl loke parasminn iha caiva karma*; Bhavabhūti, Utt. 7,15; Brahmapur. 144,21 *ubhau tau daṃpatī... saṃgatau... ubhau daṃpatī saṃbabhūvatuḥ*; 166,6; 168,35 *bhuktimuktī ubhe api*; 179,6 *kimarthaṃ tau samutpannau Kṛṣṇasaṃkarṣaṇāv ubhau*; 184,34; 187,2; VāyuPur. 66,62 *udāyāstamayāv ubhau*; 85,12 f. *tāv ubhau devau ca Mitrā-Varuṇau*; 27,38 *sameyātāṃ sūryacandramāsāv ubhau* "sun and moon (which are often mentioned together, which form a pair)"; LiṅgaPur. 70, 44 *sābdasparśaguṇāv ubhau*; 70,72 *pradhānapuruṣāv ubhau*: "p. and p. (which form a complementary pair)"; Hariv. 188 *Sundaś ca Nisundaś caiva tāv ubhau*; Daṇḍin, Daśak. 5 in fine *asya... sāhāyyadānaṃ... -bhūmigamanam ity ubhayam apekṣya* "in der doppelten Absicht, sowohl... als auch..." (J.J. Meyer).

Additional remarks

It does not seem to have been noticed that the order of the elements in a syntactic group containing the word for "both" is often not in harmony with that of a group containing "two". In his Altindische Syntax Delbrück [93] gives one single instance of a group consisting of *ubhau*, a demonstrative pronoun, and a noun: AitBr. 3,29,5 *ubhe... ete savane* (*ubhe vā eṣa ete savane vipibati Savitā*). This order of words is, indeed, also found when *ubha-* and the pron. are not separated by other elements: PBr. 12,11,22 *ubhayor anayor lokayoḥ*; AthV. 8,5,3 *dyāvāpṛthivī ubhé imé*; also 6, 58,1; 10,7,35; 11,5,8 *nábhasī ubhé imé* etc., cf. also AthV. 8,5,9 *ubháyīs táḥ párā yantu* and similar locutions; Mbh. 12,266,13 *yuktakṣamāv ubhāv etau*. Elsewhere the dem. pron. is put before *ubhau*: ṚV. 5,82,8 *yá imé ubhé áhanī...*; AthV. 10,4,8; ŚatBr. 3,2,2,14 etc. In Greek ἄμφω precedes the article (or pronoun), when both words attend the same substantive: Is. 5,16 ἀμφοῖν δὲ τοῖν διαθήκαιν [94] In occupying this place it is in harmony with the pronouns ὅδε, ἐκεῖνος etc. This order of words is in keeping with that found in the ancient German idioms: Goth. Luc. 5,7 *jah gafullidedun ba* þo

93) B. Delbrück, Altindische Syntax, Halle a. S., 1888, p. 99.
94) Cf. Keck, o.c., p. 48.

skipa "... both ships" (hence such German forms as *beide* < the word for both + the definite article); Luther: *beide diese Wesen* (like *alle diese Wesen*), *von beider diesen Punkten*. In Old English the construction of *bō*, which in the course of time was replaced by *both* which is believed to contain the definite article, follows, to some extent, that of *all*. A Latin instance: Cicero, De Or. 2,9 *ambo illi oratores* (but Pis. 58 *horum amborum consulum*). As to 'two' the rule is, in Greek: αἱ δύο μναῖ [95]; cf. also RV. 10,137, 2 *dvā́v imaú vā́tau vātaḥ*.

It has already been intimated that Skt. *dvau* can express the idea which is usually worded by *ubhau*. The Petrograd Dict. already gave Rām. 6,95,44. The frequent use of the 'numeral' in connection with well-known pairs of the Ἄτρειδα δύω type, indeed, easily leads to this confusion. This phenomenon is not confined to Sanskrit. Compare e.g. Av. Yt. 14,45 *aməmča vərəθraγnəmča... dvā apātara* etc., *dva aδwō.žən* "Kraft und Sieg,..., die beiden Beschützer... die zwei..." (Lommel). In Mod.Pers. *du* can stand for "two" and "both", *har du*, which is now more usual, (*har*: Av. *haᵘrva-*, Skt. *sarva-* "all, entire") = "both of them". In Mod.Gr. ἄμφω has disappeared, and ἀμφότεροι being a learned word, δύο "two" has taken over its function.

The vicissitudes of Lat. *ambō* in the Romance languages are interesting: although the modern form *ambos* is a latinization instead of *amos*, Spanish has preserved it; in A.French a Vulgar Lat. **ambi-dui* "both of the two" survived for several centuries: *andoi, an(s)-dous*; this 'reinforcing' compound which is also known in Rumanian, has been preserved in Italian *ambedue*, though *tutt'e due* is the usual colloquial form; in French it was superseded by *tou(te)s (les) deux, les deux, l'un(e) et l'autre; nous deux* and similar locutions.

The etymology and 'original' sense of Skt. *ubhau* and the corresponding words in the cognate languages being rather obscure [96] it seems worth emphasizing the meaning of such derivations as AInd. *ubhayatas*. A *nyagrodhaśuṅgā́m ubhayataḥphalā́m* (Gobh. GS, 2,6,6) is a "shoot of the ficus Indica with fruits on both sides"; *ubhayataḥśīrṣan-* means "having a head towards either way, two-headed"; *ubhayataścakra-* (AitBr. 5,33,4) "having wheels on both sides, two-wheeled"; *ubhayatastīkṣṇa-* (Manu 8,315) "sharp on both sides (as a spear)"; *ubhayatra* "on both sides", but also "in both cases or times, in both places". Thus the sense of "on both sides" is very frequent [97], but such connotations as *ubhayacara-* "amphibious", i.e. "living in water and on land or in the air" ("living on land and in that part of the earth which may be considered the complement of the earth"), *ubhayadat-* "having teeth in both jaws", *ubhayapad-* "with both feet", *ubhayabhāga-* "having part in both (night and day)", *ubhayavyañjana-* "having the marks of both sexes, a hermaphrodite", are far from wanting. We can express ourselves also in this way: in these derivatives the sense of "on both sides" of an entity, locality etc. stands out, but the connotation

95) Keck's (p. 48) statements on this point should be checked.
96) I refer to Walde-Pokorny, I, p. 54 f. and Walde-Hofmann, Lat. etym. Wtb., I, p. 36. Fay's glottogonic speculations (Amer. Journ. of Phil. 32, p. 408 f.) are far from convincing.
97) See e.g. the Petrograd Dict, s.v.

"referring to both sides, both components, both parts of a two-fold entity or duality" is likewise very usual. These facts, too, do not contradict the results of our enquiry in other parts of this treatise which may lead us to assume that a duality was, in a sense, considered a two-sided entity or unity.

II

When two form, to a more or less conspicuous degree, an ensemble, when duality is, in some respect or other, at the same time considered a unity, it may be expected that half of it is not simply one. Or, to express it otherwise: when a totality is double, is a 'dualité unité', when a whole, an entirety constitutes a unity but at the same time a duality, when it has two sides, two aspects, two components, which belong together, then one side or one half of it is not identical with our modern first integer 'one' which, denoting unity, applies to a single whole, to an undivided entity. Only a certain familiarity with this mode of thought makes it intelligible that "one" and "half" should have been expressed by the same term, the single object being half of the 'dualité unité'.

If we bear in mind that "one of a pair of objects" is also in some languages expressed by a word which otherwise means "half" the above argument may gain in probability. In the IN language of the island of Roti "the half" is expressed by *seli* (*pao seli* "the half of a pao-fruit"), which properly means "one of the two sides of an object, one side or the other side of it". Hence this word is also used to indicate one of those limbs which exist in pairs: *limak seli* "one of (the pair) of hands, one hand". [1]. In Malay *bĕlah* "splitting, cleaving into two" also means "one of two sections or of a pair, side, portion, quarter, direction": *bĕlah dua* means "split in two" (*dua* "two"), but *mata sĕ-bĕlah* "one eye" (*mata* "eye(s)", *sĕ-* symbolizes the unit); the Sundanese *beulah* means "cleft (s. and adj.)" and "the half". In Bolaang Mongondow (an IN idiom in Celebes) *ḷosi* means "splitting, cleaving, dividing into halves", and "half, a side of an object, half of a stock or supply"; besides the word serves as a classifier or numeral coefficient for cloven or halved objects. By means of this word "half of a tree" is expressed as well as "one side of the road" [2].- Onesidedness and incompleteness go also together in such passages as Śatapathabrāhmaṇa 5,1,4,5 "(the horse) was produced incomplete (*asarvaḥ*); hence it does not stand on all its feet, but it stands lifting one foot on each side (*tasmān na sarvaiḥ padbhiḥ pratitiṣṭhaty ekaikam eva pādam ud̠acya tiṣṭhati*). Cf. also BāUp. 1,4,3.

In ancient Indian the words *ardha-*, to wit *árdha-* and *ardhá-* in accordance with the rules of accentuation [3], referred to a region, district, part of a space and forming part of a spatial whole respectively, the total area often, but not necessarily, consisting of two ardhas. Thus we find ṚV. 1,92,1 *pū́rve árdhe rájasaḥ* "in the eastern region, or side, of space" (the word *rajas* may be translated by "space, expanse, distance, extent etc."); 1,164,12 *divā́ḥ... páre árdhe* "in the remote, ulterior, extreme region of

1) For further particulars see J.C.G. Jonker, Rottineesche Spraakkunst, Leyden 1915, p. 305. See also above, p. 5.
2) I also refer to my remarks on "half of a pair" in chapter I.
3) That is to say with such instances as *códa-* "implement for driving or animating": *codá-* "animating" (see, however, also W.D. Whitney, A Sanskrit Grammar §1148, 1d), and such Greek phenomena as are, e.g., discussed by Ch. Bally, Manuel d'accentuation grecque, Berne 1945, §§ 99 and 113.

the sky" ("auf der jenseitigen Hälfte des Himmels" Geldner), cf. the compound *parārdha-* "the more remote or opposite side": AitBr. 8,15 *āntād ā parārdhāt pṛthivyai*; ŚatBr. 8,5,1,4 *sarvataḥ* "on all sides": *parārdhe* "on the other side"; ṚV. 6,27,5 the *pūrva-ardha-* of a group of men refers to the front-side; 6,47,21 beings are driven away from their seat or abode (*sadman-*) to the other *árdha-*; AthV. 8,9,1 it reads "whence were those two born? which side (*katamaḥ so ardhaḥ*) was that?"; ṚV. 10,28,5 a spot or place where a vehicle makes a stand is designated by this word; ChUp. 5,3,4 and 6 *pitur ardham eyāya* means "he went to his father's place"; KauśS. 126,3 *araṇyārdham abhivrajya* and similar texts. In the Śatapatha-Brāhmaṇa this word is often found; Eggeling translated it by "locality, community, place, domain, district"; the last shade of meaning ("part of a larger territory") is, for instance, evident 12,1,1,10 (cf. also 1,4,5,5; 3,7,4,10); the term also applies to the site of the sacrificial fire (7,3,1,6; 14,2,1,15) [4].

The word is usually [5] connected with the adverb *ṛdhak* which in the Ṛgveda repeatedly occurs in such meanings as "separately" (e.g. 6,40,5 *yád indra divi pārye yád ṛdhag yád vā své sádane yátra vāsi*, where Sāyaṇa supplies us with the comment: *etat pṛthakśabdena sāmānārtham, pṛthag anyasmin deśe vartate*, the meaning must be "not in one's usual habitation, not in the community"; cf. also 7,61,3 *spáśo... ṛdhag yatáḥ* "aside, apart"; 57,4 "not in (our) community, not here"); "singly, one by one" (9,64,30; 3,25,1 *ṛdhag devắm ihá yajā*, i.e. *pṛthak-krameṇa* Sāyaṇa; 4,34,9 *ṛdhag ródasī* "heaven and earth, which are kept apart, have an individual existence"), and "particularly" (3,90,1). In view of these meanings the etymology proposed by Walde-Pokorny [6] is, though not convincing (the Balto-Slav. group Lit. *iraũ ìrti, ardaũ ardýti*, and especially OChSl. *orjǫ oriti* etc. do not only refer to "separating" but also to "destroying"), worthy of consideration. Etymologizing apart there is ample room for the supposition that the idea underlying both Vedic words is that of "occupying a separate or special part of a spatial whole". Hence also the use of *árdhau* in the sense of "the two parties" ṚV. 2,27,15 *ubhắv árdhau bhavataḥ sādhū asmai*, where Sāyaṇa explains: *jagato bhāgau carācarātmakau mārtyāmartyātmakau vā*.

The meaning of *ardhá-* may be illustrated by the following texts: ṚV. 10,27,18 *pácāti némo nahí pákṣad ardháḥ* "some of them shall cook, part of them shall not cook" (Sāyaṇa: *eko bhāgaḥ... aparo bhāgaḥ*) [7]. The same sense of "forming part of a whole" underlies 7,18,16 *ardhám vīrásya* "(those who constitute) the party of that man"; 4,32,1 *asmắkam ardhám ā gahi* "to our party, group"; 2,30,5 etc. The meaning "one lot, part, side of a whole (in contradistinction to the whole itself or to the other part or side)" is also found in other Vedic texts: ŚatBr. 3,6,2,22 *teṣām vā ardhān upakiranti, ardhān anudiśanti* "they are in part raised, in part they

4) As is well known the meaning "part of a larger territory or object" (*ekadeśa-*) persists in later texts; cf. e.g. Kālid. Ragh. 6,16 *āsanārdhe*.
5) R. Roth, in the Petrograd Lexicon I, p. 1058; Grassmann, Wörterbuch, 290; Walde-Pokorny, Vergl. Wörterbuch I, p. 143.
6) Walde-Pokorny, loc. cit.
7) For *nema-* see further on.

are assigned" (Eggeling); 5,1,3,5 (likewise the plural form). As a rule the whole is conceived as consisting of two parts, and these parts are each other's complement: 4,6,8,5 *athetareṣām ardhā dakṣiṇata upaviśanty ardhā uttarataḥ* "and of the others those who form one group, i.e. half of them, settle down south and those who form the other group, i.e. the other half of them, north (of him)". The two ardhas together constitute a whole: 5,2,1,10 "the wife is the complementary part (*ardhaḥ*) of his own self (i.e. which completes him; hence, as long as he does not marry her, for so long he is incomplete (*asarvaḥ*)"; 8,6,1,12 "the mate (the text has *mithunam* which means "the complement in forming a pair") is the complementary half (*ardham*) of the self, for when one is with his mate, than one is whole and complete...". In these passages the usual translation "the wife (mate) is one half of the self" is, in my view, not correct[8]. 10,5,2,8 *ardha-* is again put on a par with *mithuna-*, and hence equivalent to "complementary part of the whole which is a dualité unité": "this person in the left eye is the *m.* of that one (in the right eye); now, a *m.* is the *a.* of one's own self" (*ardhám haitád ātmáno yán mithunám*) Cf. 14,1,2,11.

ŚatBr. 4,1,3,14 there is question of a cup which is divided into two parts (*dvedhā*); one part is given to Vāyu and the *ardha-* is, again, divided; here *ardha-* without being expressly designated as "the half, half of the cup" is the other part. 3,6,1,26, however, *ardha-* must, at least approximately, be equivalent to half in the sense of "one of two equal parts of a whole": one *ardham* of it should be inside the altar, and one half outside; or more than one half inside...; or the whole (*sarvam*) of it...". Then, the word is also applied to the two complementary parts of one and the same being: 10,1,3,2: ... of that Prajāpati, *ardham* was mortal, *ardham* immortal; 1,2,2,5 the two halves (called *ardhaḥ*) of the sacrifice are referred to by "these two" (*tā ubhau*). Cf. Manu, 1,32. Compare, in this connection, *árdha-* in the sense of "flank, side": 11,2,6,5; 6; 8,2,4,19 *dakṣiṇaṃ tad ardhaṃ paśor vīryavattaraṃ karoti* "he thus makes the right side of an animal the stronger"; 8,6,2,12. Here *árdha-* corresponds to the Av. *arəδa* Yt. 10,100 etc. As an equivalent of the Eng. adjective *half* *ardha-* is likewise a substantive; in this sense it is mostly compounded: *ardhapippalī* "a half berry of the pippala-tree" = *ardhaṃ pippalyāḥ*[9]. The indeclinable *sārdham* in the sense of 'jointly, together, with" is also to be explained from the above sense, not from *ardha-* "half". As to the above *mithuna-*, it meant "forming a pair, being the complementary part of a 'duality'". In ancient texts "pair or couple" was usually denoted by *mithunau*. Compare also such texts as ChāndUp. 1,1,6 *yadā vai mithunau samāgacchata āpayato vai tāv anyo 'nyasya kāmam* "verily, when a pair come together, the two procure each the other's desire": here *anya-* + *anya-* (to which we shall revert) constitute the *mithunau*.

Another interesting term is the partly pronominal *néma-* which only occurs in part of the Vedic Saṃhitās[10]. It has no doubt

8) Thus we say in Dutch *wederhelft, betere helft* (Engl. *my better half*) i.e. "wife or husband", but not the word *helft* (*half*) alone.
9) See Pāṇini, 2,2,2. For *ardha-* cf. also Nala 10,3 (cf. 9, 7).
10) See Wackernagel-Debrunner, Altindische Grammatik III, p. 576 f.

been rightly connected with Ved. *nemádhiti-* "separation, the dividing into two parts" (expecially, but not necessarily (cf. ṚV. 1,72,4), of combatants). The Av. *naēma-* is often used to express the idea of "latus alterum, the other side or half": the *aδara-* n. "lower side" as opposed to the *upara-* n. "upper side", the left side as opposed to the right, the front side as opposed to the hind (the respective adjectives being added); *antarāṯ naēmāṯ* means "within", *vaēibya naēmaēibya* "from both sides". The idea of dividing a whole into two sides may be considered fundamental, notwithstanding a minority of Av. texts where "side (in general)" is the sense to be attached to the word: Yt. 10,19; 41 etc.; the front, left, right etc. being indiscriminately called *naēmas*, this shift of meaning is intelligible. The Av. *naēma-* further means "half", in most cases in connection with a space of time which may be due to chance. The same sense is expressed by the class. Skt. *nema-* in the beginning of a compound [11]. It would appear to me that ṚV. 10,48,10 *prá némasmin dadṛśe sómo antár gopā́ némam āvír asthā́ kṛṇoti*, where "the one... the other" are meant (cf. also, in the plural, 4,24,4; 5 and Kāṭh. 14,9 *neme devā neme asurāḥ* "on the one hand the gods, on the other the asuras") join the above usage of the word. A single *nema-* is also found: ṚV. 6,16,18 *nahí te pūrtám akṣipád bhúvan nemānām...* "not even a small part... should fall to others"; in connection with *ardháḥ* 10,27,18 (see above); 1,54,8 *prá somapā́ ápasā santu néme* the plural *néme* is rightly translated by Geldner [12]: "die Partei der Somatrinker soll durch ihr Werk den Vorrang haben". The word might have occurred also when the part of the whole, the party, the half or side is not expressly opposed to others; then "one, several" (Germ. mancher) would have been the obvious translation [13]: in the only passage where, according to Grassmann [14], this meaning is found, it reads *néma u tva āha* "some one or other".

There are many words for "half" in various languages which have no connection with a numeral in the proper sense of the word. Among them words for "side" are also found elsewhere: Ir. *leth*, originally "side" (~ Lat. *latus* "side" as a part of the body [15], then the side of an object in general), means "side" and "half"; the Sl. *polŭ* (ChSl.) etc. does not only express the idea of "half", but also those of "side, shore etc." [16]. Compare also in the Germanic languages: Germ. *halb*, Dutch *half*, Engl. *half*, Got. *halba*, ON. *halfa*, OSax. *halƀa*, OEngl. *half* "side, half".

The idea of "half" being expressed by a term properly denoting a component or complementary part of a whole or a part which is supposed to have a complement, the ideas of 'half' and 'a single part, party, group or individual' are not seldom expressed by the

11) Some of the other meanings mentioned by Indian lexicographers (*kāla-* "time"; *avadhi-* "limit, term"; *ūrdhva-* "the upper part") may be somewhat incorrect interpretations of *nema-* in the above sense of Av. *naēma-*.

12) K.F. Geldner, Der Rigveda übersetzt.., I, 1923, p. 64.

13) We shall have to revert to this point.

14) H. Grassmann, Wörterbuch zum Rigveda, p. 755.

15) As to the form of the word see my treatise "Ancient-Indian *ojas*...", Utrecht 1952, p.67. The original identity of the Celtic and the Latin words is denied by Walde-Hofmann, Lat. Etym. Wtb.^{3}, Heidelberg 1938, p. 772.

16) Cf. also F. Miklosich, Etym. Wörterbuch d. Slav. Spr., Vienna 1886, p. 255 f.

same word. Another instance is the Celtic **hanter*: OW. *hanther*, MNW. *hanner*, Corn.Br. *hanter* which, representing IE. *sṃtero-*, which may stand for **sm-tero-*, is completely identical with the Greek Dor. Boeot. etc. ἄτερος [17] (Att. ἕτερος): the Celtic words mean: "the half", the Greek "one or the other of two". As is well known the Greek word is often used of natural pairs: Il. 16,734 σκαιῇ (sc. χειρὶ) ἔγχος ἔχων, ἑτέρηφι δὲ λάζετο πέτρον; but also Hdt. 3, 156 τὴν ἑτέρην πύλην "one of the two gates"; after τούτω....ἄμφω: Il. 5,258; also in the plural: one of two sets, groups, parties: Il. 20,210 τῶν ἕτεροί γε παῖδα κλαύσονται "one set of parents, either mine or thine": here the genitive τῶν depends on the two pairs of parents which are referred to in the foregoing verses, a construction (the genitive of the whole) which is only to be expected and must be ancient. This word being formed by means of the suffix *-tero-* which expresses the, especially spatial, opposition of two entities [18], the root *sem-* from which it derives cannot have meant "one" in the 'modern' sense of the first integer or of absolute oneness, as is usually or tacitly admitted by the authors of etymological lexicons [19]. It must have referred to "one in relation to another, to a second". It would even appear to me that **sem-* expressed the idea of the single person or thing, a complement of which is present or supposed to exist, the idea of the single person or object which forms part of a whole. Starting from this basal sense we understand how the above meanings of ἕτερο-, and its frequent use in connection with alternatives presented (e.g. Soph. El. 345 ἑλοῦ γε θάτερ', ἢ ... ἢ ...; Thuc. 4,28 δυοῖν ἀγαθοῖν τοῦ ἑτέρου τεύξεσθαι) and the Celtic "the half" are, also with regard to their meaning, nearly related: the ἑτέρα χείρ originally was the one hand which is completed by the other, one of the pair of hands, one of the two hands, the half of the pair of hands as opposed to the other. IE. *sṃtero-* was "the one (or the other) as opposed to, as distinct from, the other (or the one) component of an ensemble or set of two (entities or parties)".

It does not even seem too rash to derive, from these considerations, an argument in favour of the much-questioned etymology of Got. *sundro* "apart, separately", OHG. *suntar*, OEngl. *sundor* etc.

17) See H. Pedersen, Vergl. Grammatik der keltischen Sprachen I, Göttingen 1909, p. 138; Walde-Pokorny, o.c. II, p. 488; Buck, A Dictionary of selected synonyms in the principal I.-Eur. Languages, 2Chicago 1949, p. 935; E. Boisacq, Dict. étym. de la langue grecque[2], Paris 1923, p. 292; A.J. van Windekens, Morphologie comparée du Tokharien, Louvain 1944, p. 206 ff.

18) See also E. Benveniste, Noms d'agent et noms d'action en Indo-Européen, Paris 1948, p. 115 ff.

19) Cf. e.g. A. Walde - J.B. Hofmann, Lat. etym. Wtb.[3], Heidelberg 1951, p. 511; A. Ernout et A. Meillet, Dict. étym. de la langue latine[3], Paris 1951, p. 1081; Walde-Pokorny, o.c., p. 488 "eins" und "in eins zusammen, samt, mit"; Boisacq, o.c., p. 231; J.B. Hofmann, Etymologisches Wörterbuch des Griechischen, München 1950, p. 74 ff.; S. Feist, Vergl. Wtb. d. Gotischen Sprache[3], Leiden 1939, p. 422; according to Meillet-Vendryes, Traité de grammaire comparée des langues classiques[2], Paris 1948, p. 510 *sem-* = "one", *oino-* "sole".- Joh. Schmidt, however, was of the opinion (KZ. 36, p. 397) that *sem-* originally denoted "nur eine solche Einheit, welche durch Zusammenschlusz einer Mehrheit von Bestandteilen entsteht wie die wurzelverwandten ἁμά, ὁμοῦ usw. deutlich erkennen lassen"; cf. also Brugmann, Grundrisz[2] II, 2, p. 7 and H. Hirt, Indog. Grammatik III, Heidelberg 1927, p. 308 and Ind. Forsch. 22, p. 91.

"separately", MHGerm. *sunder*, Dutch *zonder* "without" [20], etc. the original identity of which with the Gr. ἄτερος etc. was, I think rightly, assumed by Joh. Schmidt but rejected by other scholars [21]. The German word has apparently emphasized the idea of 'singleness', of being one or single without one's complement, which properly ought to be present. Hence the German usage in *sonderbar* "specialis, diversus, sich auszeichnend vor anderen, für einen einzelnen Fall verwirklicht"; *sonderling* (in ancient texts) and Dutch *zonderling* "der sich absondernde", usually in the specialized sense of "singular, eccentric". The word *sonder* itself which could serve as an adverb, conjunction, preposition or adjective, stood for "abgesondert, einzeln, jeder für sich, für sich allein" etc.; *sondere personen* meant "einzelne personen", and then also "private persons". As a prefix *sonder-* "special" has its counterpart in OE. *sundorcraeft* "special power" [22]. In such English words and locutions as *to sunder* "to put apart, sever, separate, to remove from the whole or the other objects to which an object belongs", *all and sundry* "everyone, collectively and individually" the ancient meaning of *sem-* and *sm̥-tero-*, as specified above, is, I think, still conspicuous. In former times *sundry* could also be equivalent to "individually separate; one of a number of individuals of a class or group" and even to "different, other, diverse" (in a 15th century passage: *the king changyt on syndry hors off Spayn* [23]); here it is nearly identical in meaning with Gr. ἕτερος. There are IE. words which may be adduced as illustrations: AInd. *anyatra* "elsewhere, on another occasion, otherwise; except, without": ŚatBr. 14, 1, 1, 1 *devā anyatraivāśvibhyām* "the gods except the two Aśvins"; Gr. νόσφι "apart, aside, aloof" and "beside, except"; Lat. *ceterum* "as far as the other is concerned, for the rest, otherwise" > "on the other hand, besides, but", and Gr. ἀλλά "but, yet" which originally was a so-called neuter plural of ἄλλος: "otherwise" [24].

On the strength of these words (cf. also the Engl. *apart* < Lat. *ad partem* "to the one side or part", 1st on one side, 2nd in *apart from* etc.) and especially of the prepositional use of MHD. *sunder*, Dutch *zonder* etc. it seems possible now to suggest answering the disputed questions [25] as to the etymological connection of this German group and the Gr. ἄτερ "without, apart from, aloof" (Epic, Ionic, Trag.) in the affirmative (cf. *-ter* in Lat. *in-ter*, Skt. *an-tar* etc.).

20) For the literature on the subject see esp. Feist, o.c., p. 458 f.
21) Joh. Schmidt, Kuhns Zeitschrift 25, p. 92; 32, p. 360; also K. Brugmann, Grundrisz d. vergl. Gramm. II, 1^2, p. 324 and others. Other scholars among whom Feist connect the German group with the Celtic *hanter*, but not with ἄτερος; Walde-Pokorny, o.c. II, p. 495, reject this etymology for semantical reasons.
22) For the syntactic particulars and the semantic development of the Dutch preposition *zonder* "without" etc. see e.g. E. Verwijs - J. Verdam, Middelnederlandsch Woordenboek, The Hague 1912, VII, 1541; F.A.Stoett, Middelnederlandsche Spraakkunst[3], The Hague 1923, p.82.- It may be observed that the Dutch *behalve* "1. except, other than, 2. besides, in addition to" is instructive: it derives from **bi* and *halβō-* "side" and originally meant "on the side of".
23) Other instances may be found in Murray's New English Dictionary, Oxford (Oxford Engl. Dict).
24) See Schwyzer, Griech. Gramm. II, p. 578.
25) See e.g. Boisacq, o.c., p. 95; Feist, o.c., p. 458; P. Chantraine, Grammaire homérique, I, Paris 1948, p. 136.

We now come to another disputed etymology. Persson's proposal [26] to connect AI. *sāmi-* Gr. ἡμι-, Lat. *sēmi-*, OHG. *sāmi-* "half" in the sense of "zu gleichem Teil" with IE *sem-* "eins, samt" was not adopted by Walde-Pokorny [27]. There seems, however, to be room for the following considerations. The word **sēmi-* is as good as always used in the beginning of a compound. In this it goes to a certain extent with IE *ambhi mbhi* (Lat. *amb- am-* etc.; Celt. *am- bi- am-*, Gr. ἀμφί) "on both sides of" with which it has the final *i* in common [28]. This word *ambhi mbhi* is evidently cognate with **ambhō(u)* (Gr. ἄμφω, Lat. *ambō*) "both" which is often used in connection with those pairs or sets of objects which are singly qualified by ἄτερος, ἕτερος (√*sem-*): Hom. Od. 8,135 ἄμφω χεῖρας; cf. also Xen. Eq. 1,9 ἀμφότεραι αἱ γνάθοι, ἢ ἡ ἑτέρα. Now, in Greek ἡμι- often occurs to express the idea of "on one side of an object which has two sides, referring to one side of an ensemble consisting of two; one-", its counterpart being ἀμφι- which refers to both sides concerned. Thus ἡμίκουρος means "sheared on one side" (which of course may be translated by "incompletely sheared" or "half-sheared"); ἀμφίκουρος "shorn on both sides, lopped of its branches"; ἡμιτρής "bored on one side, incompletely bored": ἀμφιτρής "bored or pierced through on both sides" said of a cave in a rock with a double entrance. In such cases ἀμφι- can often be translated by "completely", ἡμι- by "incompletely": ἡμίβροχος "half-watered" (γῆ): ἀμφίβροχος "thoroughly soaked"; ἡμιθαλής "incompletely or 'half' blooming or thriving, i.e. 'half-green'": ἀμφιθαλής "blooming on both sides" said of children who have both parents alive, and of a place which is "flourishing on all sides"; ἡμιχανής "incompletely or half open": ἀμφιχανής "gaping wide"; ἡμίκλαστος "incompletely broken": ἀμφίκλαστος "(completely) broken". ἡμι- can be translated by "half" (in the colloquial sense of the word: "not complete, partial" which is no doubt more original) in so far as it refers to one side or to the incompleteness of the whole. It would often be impossible to translate ἡμι- by "half" in its strict sense, i.e. equivalent to, or consisting of, one of two precisely equal parts, degrees, amounts etc.": ἡμίανδρος "eunuch (an incomplete man)"; ἡμίεργος said of an embryo. In this connection an observation of the Indian lexicographer Halāyudha (Xth century) is worth mentioning: *sāmi* is not only equivalent to "half", but also to "incomplete" (*asampūrṇa-*); when said of an unborn child it means "in an embryonic state, prematurely": TS. 5,5,1,6 *yathā sāmi garbho 'vapadyate*; cf. also PañcBr. 9,3,1 *yadi satrāya dīkṣerann atha sāmy uttiṣṭhet* "if they have undergone the consecration for a sacrificial session and (one of them) rises too soon ("before the end of the session": *asamāpyaiva kena cid vyādhyādinā nimittena* Comm.)"; ŚatBr. 2,3,3,4 *na sāmy udvāsayeta* "one must not remove it (the sacrificial fire from the hearth) too soon" [29]; 1,7,4,3 (incorrectly translated by Eggeling). And in mo-

26) P. Persson, Beiträge zur indog. Wortforschung, Uppsala 1912, p. 144.
27) Walde-Pokorny, o.c., II, p. 493.
28) Compare the *i* in **peri* (Gr. περι, Skt. *pari*), **anti* (Gr. ἀντι beside ἀντα, ἀντην, Skt. *ánti*, Lat. *ante*) which expressed such ideas as "round about, round, around" and "before, in front of, facing etc." respectively.
29) In this use the word *sāmi* is uncompounded.

dern usage *semi-civilized* means "not fully civilized", and *semi-lunar* "crescent-shaped"; in Dutch a *semi-arts* is a person who is a physician but for his last (of the 4 or 5) examination. Hence, the Ved. *asāmi* in the sense of "complete": of *ojas* "vitality" RV. 1,39,10; 6,19,2 *sadyáś cid yó vāvṛdhé ásāmi* "who in one day attained to a full growth" ("grew completely up"); 10,22,3 etc. In the sense of "half of a twofold whole" [30] we find the Gr. ἡμι- for instance in ἡμιζύγιος "forming half of a pair of scales" (the English translation is nearer to the original sense than the German "eine halbe Wage..." or the Fr. "une demi-balance"). Then also when one object is divided into two: ἡμίτομος "cut in two" of one piece of wood; the ἄντυξ ἡμίτομος ... σελάνας is the "disc (ἄντυξ "orbit of a planet") of the half-moon". In connection with the disputed etymology of Lat. *sinciput* "the foremost part of a pig's head" – an original **sēmi-caput* is always more plausible than Wackernagel's [31] **suīno-caput*, the object denoted being only part of a head – ἡμικεφάλιον which expresses the same sense, is of some importance.

There are, to my mind, other considerations which may induce us to assume the etymological relation of **sēmi* – notwithstanding its *ē* [32]– and *sem-*. Incidentally, in Greek ἡμι- and ἑτερο- are rivals: both ἡμικρανία and ἑτεροκρανία denoted the "pain on one side of the head or face". The technical term ἑτερογενής "of different gender" was translated into Latin by *semigenius*. But ἑτεροθάλης is used for "flourishing on one side" said of children of the same father, but different mothers (see above) and an ἑτερομάσχαλος χιτών is "a frock with only one hole for the arm", in contradistinction to an ἀμφιμάσχαλος frock which has two arm-holes. Whereas ἡμι- expressed the idea of being incomplete or single, of relating to only one side [33] of a whole or an entity which was considered as normally double or consisting of two components or sides, ἑτερο- as we have seen referred to the one or the other of the two components of a dualité unité.

There is no doubt, I think, that this usage was proper to these words from prehistoric times, for the ancient Indian texts provide us with a parallel. There *ubhaya-* "both" is generally used in order to designate both sides or both parts of an object considered as a unit: *ubhayadat-*, *ubhayatodanta-* etc. mean "having teeth in both jaws" as opposed to *anyatodat-* "having tooth on one jaw only" (cf. ŚatBr. 1,6,3,29 f.); *ubhayatojyotis-* "possessed of light on both sides": *anyatojyotis-* "possessed of light on one side only" (ŚatBr. 12,2,2,1), *ubhayacara-* "amphibian, living in water and on land", and other such words among which, according to the felicitous interpretation given by Dumont [34], also *ubhayedyuḥ* "on both parts of the day", i.e. "in the daytime and in the nighttime", and *anyedyuḥ* "on only one part of the day" [35].

30) Cf. e.g. also ἥμισυς Aesch. Eum. 428.
31) J. Wackernagel, in M. Niedermann, *ĕ* und *i* im Lateinischen, Darmstadt 1897, p. 31. The word did, however, not apply to a complete pig's head.
32) I am not able to explain this *ē*.
33) Compare Ernout-Meillet, Dict. étym. de la langue latine[3], p. 1082 "I.-e. **sēmi* indique ce qui n'a qu'un côté".
34) See P.E. Dumont, Vedic *anyedyúḥ* and *ubhayedyúḥ*, in J.Am.Or.S. 59, p. 425 ff.
35) Cf. also RV. 4,55,3 *ubhé...áhanī* "beide Tageshälften" (Geldner); 5, 82,8 (= *rātryahanī* Sāyaṇa).

On the other hand the word ἑτερο- also occurs in opposition to ὁμο- : ἑτερογενής "of different kind or materials": ὁμογενής "of the same kind or general character". It seems therefore worth while to dwell for a moment on a sense of ὁμο- < IE. *somo- <sem->. The usual rendering: ὁμο- "gemeinsam, ähnlich, gleich, eben, glatt" [36]; "one and the same, common, joint", may perhaps lead to misunderstandings. A man who is characterized as a ὁμοτράπεζος (Herod. 9,16) is "eating at the same table with another", a ὁμοκωμήτης is "a member of the same village-community, a fellow-villager", a ὁμομαστιγίας "a fellow-knave", a ὁμόδουλος "a fellow-slave", the verb ὁμοδρομέω expresses the idea of "running the same course with another", or "keeping pace with"; ὁμόζυγες are "animals which are yoked together with their congeners", ἑτερόζυγες must have applied to those "which are yoked singly, without their yokefellows". The word ὁμο- clearly symbolizes the idea of "being, having, doing together with another (others) of the same category, sharing the same... with a partner or fellow". This general sense is for instance very distinct in ὁμόζυγος when standing for "the corresponding on the other side", e.g. of the limbs of the body, such as eyes, hands, feet [37]; the hands and feet are called ἄμφω ὁμοφυέα "both of the same growth or nature". Apollo and Artemis, who are twins, are in the Homeric hymns referred to as ὁμότροφοι; Pind. Ol. 13,7 Δίκα καὶ ὁμότροφος Εἰρήνα (who are sisters) "reared together". In these cases the idea of 'complementary partnership' is evident. The stem ὁμο- and roots for "procreating, being born, or words for "father", "mother", or "womb" often combine to form terms denoting "of the same race"(ὁμογενής), "sprung from the same parents, brother, sister" (ὁμόγνιος, ὁμόσπορος), "of the same father etc." (ὁμοπάτριος); "of the same womb, uterine" (ὁμογάστριος). The compound ὁμοτέρμων applies to a person who (or to an object which) shares the same boundary (τέρμων, τέρμα) with another; the ὁμοτέρμονες live on both sides of the same boundary.

In this connection the word ὁμοῦ is worthy of attention. In the Iliad, 23,84, it is explicitly used in opposition to ἀπάνευθε "far from": not ἀ. but ὁμοῦ "at the same place, together"; and Xen. Cyr. 6,1,7 ὁμοῦ εἶναι is opposed to χωρὶς εἶναι "to be apart, separated". The two parties said to be ὁμοῦ often consist of no more than one entity each; hence such constructions as Od. 12,424 ἄμφω συνεέργον ὁμοῦ τρόπιν ἠδὲ καὶ ἰστόν. This adverb is also often used in association with two substantives which are already connected by καί or τε: Il. 11,245 "a thousand smaller cattle, both goats and sheep": αἶγας ὁμοῦ καὶ ὄις; Il. 20,499 ἵπποι στεῖβον ὁμοῦ νέκυάς τε καὶ ἀσπίδας etc.

Although the words beginning with ὁμο- very often apply to two partners or parties (ὁμόπαις "twin-brother or sister"; ὁμοπάθεια "common quality of two things") cases are far from rare in which one person or object is stated to be ὁμο- with, or the ὁμο- of more than one other entity: τὰ ὁμόγονα are "animals of the same kind, congeners". Thus, ὁμόφυλος "of the same race, akin" is not only opposed to ἑτερόφυλος "of another race", but also to ἀλλό-

36) Walde-Pokorny, o.c., II, p. 490.
37) Texts are quoted in Liddell and Scott, Greek-Engl. Lexicon ed. 1948, p. 1224.

φυλος "of another race, tribe, foreign". The idea of sameness in the sense of "being of a uniform character", is however only seldom expressed: ὁμόχροια "even surface of the body or skin"; ὁμόχρους "uniform in colour". It would appear to me that this connotation did not originally belong to the stem ὁμο-.

A short remark should be made on the equivalence of ὁμο- and the ἀ- copulativum in ὁμόκοιτις, used by Plato, Crat. 405 d to explain ἄκοιτις "bedfellow, wife"; ὁμοφήτωρ a gloss (Eust.) on ἀφήτωρ which was explained as "prophet" from ἀ- copulativum and φημί; ὁμογάλαξ = ὁμόθηλος "suckled with the same milk, foster-brother or sister" = ἀγάλακτος (Hesychius); ὁμοτάλαντος a gloss (E.M.) on ἀτάλαντος "equal in weight, equivalent"; ὁμόβρομος a gloss (Hesychius) on ἄβρομος "joining in a shout" and similar vocables [38]. The identity of meaning of these etymological cognate elements was evidently felt: cf. also Plato, Crat. 405 c τὸ ἄλφα σημαίνει πολλαχοῦ τὸ ὁμοῦ and in paraphrazing the sense of such words as ἄλοχος (λέχος "bed") "sharer of one's bed, whether wife or concubine" [39] ὁμοῦ "together" can render good service. Properly speaking, an ἄλοχος originally was "one who occupied the complementary part of the bed" i.e. "who shared the bed with another".

According to many authors the 'basal' [40] meaning of the ἀ- copulativum is "one" [41], or explained in this way: *sm- "unus" qui comme préfixe, signifie "avec, ensemble" [42]. Yet, in such words as ἀθρόος, ἀθρόος (cf. Skt. *sadhriyañc-* [43]) the sense "together with, forming unity with a complementary partner or with such partners" was no doubt preserved: ἀθρόος "crowded together": Od. 3,34 ἀ.... ἅπαντες; (of soldiers) "in close order" opposed to ἀσύντακτοι etc.; ἀ. of a town "(the citizens) as a whole" opposed to καθ' ἕκαστον "singly, each by himself"; or ἀ. opposed to κατὰ μέρος "severally, successively"; compare further ἀολλής "all together, crowds or throngs" (~ εἴλω "shut in, press, collect etc."), which is also used of two only: "together" (Soph. Trach. 514). The plural ἀγάστορες means "twins" (Hesychius) and, in general, "near kinsmen" (cf. ὁμογάστριος).

As is generally known, the Skt. prefix *sa-* (which, like ἀ-, represents IE *sm-*) likewise helps to form, in an endless number of instances, words for "being of, having, the same... as; with.., together or along with...": *sakratu-* "of joint will"; *sodara-* "of the same womb, brother"; *sayoni-* "of common origin"; *sabhārya-* "with one's wife" [44].

38) We also find ὁμολείτωρ = συλλειτουργός "joint λειτουργός". Cf. also Soph. Ai. 767 θεοῖς ὁμοῦ = ξὺν θεοῖς.
39) Cf. also W.P. Clark, in Classical Review 35 (1940), p. 188 f.
40) Reserving the term 'original' for a meaning testified to by historical evidence; see my "Ancient-Indian ojas...", Utrecht 1952, p. 74.
41) See, e.g., A. Debrunner, Griechische Wortbildungslehre, Heidelberg 1917, p. 30; cf. also M. Lejeune, Traité de phonétique grecque, Paris 1947, p. 77; Walde-Pokorny, o.c., II, p. 488 f.; Walde-Hoffman, Lat. Etym. Wtb. II, 1951, p. 511; J. Mehler, Woordenboek op de gedichten van Homeros[4], Rotterdam 1919, p. 1.
42) E. Boisacq, Dict. étym. de la langue grecque p. 1; Meillet-Vendryes, Traité de grammaire comparée des langues classiques[2], Paris 1948, p. 677, are not accurate in giving "préfixe marquant similitude".
43) See K. Brugmann, Die Ausdrücke für den Begriff der Totalität in den indogermanischen Sprachen, Leipsic 1894, p. 14 ff.
44) See especially the particulars given in the Petr. Dict. VII, 453. Compare also Pāṇini 2,2,28 and 6,3,78 ff.

The word ἁπλοῦς "single; simple etc." does not constitute an exception. It is often used in opposition to διπλοῦς "double, twofold", or to such terms as μεμιγμένος which express the idea of "mixed, compound". Taking the universally accepted etymology (~ Lat. *simplus, duplus,* Got. *tweifls* "doubt" etc.: √*pel-* "folding" [45]) for granted we may suppose the basal meaning of Gr. διπλοῦς etc., Lat. *duplus* to have been "being reduced, by the process of folding, into the condition of a duality-in-unity, of a 'twofold' entity". The consideration that an entity which is, in this way, twofold or folded in two, has undergone the process only once [46] should already induce us to question the correctness of the assumption that ἁ- in ἁπλοῦς stands for the abstract "one". I would, then, suppose "reduced by folding to such a condition that the (two or even more) components coincide, occupy the same space, exist together" to have been the basal meaning of *sm-plo-* etc. The original sense of διπλοῦς is still clearly perceptible when it is used in connection with cloaks and articles of dress: χλαῖνα διπλῆ "a double-folded mantle" and most other applications are easily understandable. The Homeric χλαῖνα διπλῆ or διπλάξ (in later language διπλαῖς) was indeed "gewöhnlich doppelt zusammengefaltet (also zur ἁπλοΐς) um die Schultern gelegt und genestelt, im Bedarfsfall aber (gegen Kälte u.s.w.) ausgebreitet" [47]. Hence also ἁπλαῖ (sc. κρηπῖδες) "single-soled shoes" and other connotations. A ἁπλοῦς διήγησις is, in an intelligible way, "a narrative without dialogue" (Plato, Rep. 392 d), hence "a simple narrative". Aesch. Prom. 610 ἁπλῷ λόγῳ is opposed to ἐμπλέκων αἰνίγματα i.e. "plain, straightforward words" and not "weaving subtle riddles". Compare the Engl. *uncomplicated* "not intricate, simple", from the Lat. *complicare* "to fold together". In connection with terms for "word, thought, act etc." ἁπλοῦς must, to my mind, have meant "of which two (or more) given interpretations (of the hearer and the speaker) coincide" [48], hence "simple, open, frank etc." [49]. The word διπλοῦς can on the other hand stand for our "double-minded, treacherous", and – remember the Germanic cognates – for "doubtful". In both meanings the double character of the thoughts, opinions, convictions of one and the same person is apparent.

It would serve no useful purpose to discuss all the related words, [50], but a short remark must be made in connection with the Lat. *simplex* and *duplex* [51]. The latter is, inter alia, used of

45) J. Schmidt, KZ. 16, p. 430; Boisacq, p. 190; Walde-Hofmann I, p. 383 f.; Walde-Pokorny, II, p. 55 f. (read "falten"), etc.

46) The Engl. *to fold* is explained by "to double up".

47) Homers Odyssee erklärt von J.A.Faesi[7], Berlin 1887, p. 225. See also F. Studniczka, Beiträge zur altgriechischen Tracht, Vienna 1886, p. 74 f. (cf. esp. Hom. Od. 13,224 and Il. 10,134).

48) Compare in Latin *verba dubia et quasi duplicia* (Quint. 9,2,69).

49) I cannot subscribe to the explanation given in Liddell-Scott, Greek-Engl. Lex. (1948), I, p. 191 ("once" > "simple").

50) In my opinion, the Germ. (Goth.) *ainfalþs* "ἁπλοῦς" must, when compared with its Greek equivalent and Lat. *simplus*, be regarded as a secondary form. The difference between *oino-* and *sem-* will be discussed further on.

51) For the etymology see Walde-Pokorny, II, p. 56 and Walde-Hofmann, I, p. 383. The advantage of the explanation given in the latter book (~ Gr. πλάξ "anything flat and broad") is, as far as Gr. διπλαξ "in double layers, double" and the vowel are concerned, obvious, but the semantic relation with Lat. *plaga* "plain, region" not evident.

cloaks and similar garments which are thrown on doubly (Germ. "Doppelmantel"), a *duplex ficus* is "a fig that has been cut open and dried", *d. leges* are "laws consisting of two subsections"; *d. palmae* "the two palms of the hands of the same person". The word is, in general, used to denote objects which exist twofold, whether they are considered two entities constituting a pair or set (hands) or a single, but twofold entity (*fistula duplex*, cf. in German, *Doppelflöte, Doppelgestirn, Doppelgipfel, Doppelhaken* etc.) When applied to objects constituting pairs (*duplices oculi* etc.) the word, in poetry, "finit par être un substitut de *duo*" [52].

Now the rather frequent occurrence of words beginning with *du-* by the side of those formed with *bi-* (< **dvi*) in the Italian branch of Indo-European induces us to ask ourselves whether there is a general difference of function or of meaning between both categories. The Latin *bi*-category is productive: in Ancient Latin we find *dvidens* "two-toothed" > *bidens*; but *bifidus* "split into two" does not occur before Ovid, and *bifīlum* "a double thread" is used only by the commentator Servius [53]. The words beginning with *du-* are, on the other hand, far less numerous and, though lying at the root of many derivatives, not productive as a category. It is found in *ducentum, ducentī* "two hundred" and the group of words belonging to it, which being also used to express the idea of an indefinite high number (*centum an d.* etc.) [54] was doubtless not always an abstract symbol for 200 single entities or some other modern conception. A *dupondius, dupondium* was a coin, one piece, worth two asses [55], and, further, a linear measure ("two feet"). This word is a fine instance of the dualité unité concept expressed by means of *du-*. This concept is however not absent in many locutions formed with *duplex* (see above), etc.; *dubius* [56] is applied to one and the same person, mind, word, will, object, occurrence, which fluctuates between two possibilities etc., wavers or halts between two opinions, bears more than one interpretation, etc. Are we right in attaching some value to the fact that we do not come across forms beginning with *du-* by the side of *bifidus* etc. and in considering the *du-* group representative of a 'less modern state of mind'?

In the other Italian languages Umbr. *tuplak*, which probably means "furcam" [57], seems to be an instance of a dualité unité term. The same stem *du- tu-* is also seen in Umbr. *dupursus* "bipedibus" which appears side by side with *peturpursus* "quadrupedibus", in *dupla* "binas", *tupler* "binis" and *duti* "iterum".

As to the origin of *du-* Walde [58] at the time believed it to be "wohl kein sehr alter Abkömmling von *duo-* "zwei", sondern nach der Stammsilbe van *duo* usw. einzelsprachlich umgestaltetes **dui.*" and Hofmann [59], more apodictically, upholds the same opinion. I

52) Ernout-Meillet, o.c., p. 335. Cf. also such Engl. phrases as *dual carriage road.*
53) See the survey given by Ernout-Meillet, o.c.[3], p. 124.
54) Cf. Ed. Wölfflin, Archiv für Lat. Lexic. u. Gramm. 9, 1896, p. 188.
55) The reader might be referred to R. Cagnat et V. Chapot, Manuel d'Archéologie, Paris 1920, II, p. 270.
56) For etymological particulars see Ernout-Meillet, o.c., p. 330 and Walde-Hofmann, o.c., p. 375 f.
57) See H. Ehrlich, Ind. Forsch. 11, p. 302.
58) A. Walde, Lat. Etym. Wtb.[2], Heidelberg 1910, p. 244.

am, however, not convinced by Hofmann's argument: *du-* like *tri-* on the strength of the gen. *du-om tri-um*, because the "pluralisch umgestaltete" form *duom* is rightly considered an "einzelsprachliche Neuerung" [60].

In contradistinction to Bartholomae [61], to whose words the said authors refer, I feel tempted to reconsider the merits of the older view [62]. The form *dṷi-* (> Lat. *bi-*) has repeatedly, and in my opinion not in all respects unjustly, been considered a prehistoric or even orig. Indo-European secondary form ('Nachbildung') modelled upon *tri-* [63]; in spite of such forms as **dṷei-* *dṷoi-*, to which we shall have to recur, the stem of the 'numeral' in itself is *du-*, inflected like the duals of *o*-stems, the very numerous derivatives of *dṷi-* are ordinals, multiplicatives, adjectives derived from the latter, adverbs (like the Gr. δίχα "in two, asunder") etc.; besides, it serves as a first member of compounds.

In a large number of cases there exist parallel forms of *dṷi-* and *tri-* [64]: IE. *dṷis* "twice": *tris* "three times"; *dvi-* in Skt. *dvipad-* "two-footed, biped", Gr. δίπους, Lat. *bipēs*: *tri-* in Skt. *tripad-* "three-footed", Gr. τρίπους, Lat. *tripēs* etc., etc. Some of the words containing *dvi-* can safely be considered as having been formed in accordance with, or after, an existing *tri-* derivative or compound. In the Brāhmaṇas we come across a narrative of three brothers, Ekata, Dvita and Trita; the identity of the last with the Avestan Θrita being patent, the other names are almost generally regarded as modelled on Trita which was apparently interpreted as "the Third" "so dass Dvita ein Reimwort zu Trita darstellt" [65]. The compound *triveda-* "the three Vedas" may be an older compound than *dviveda-* (compare also such instances as *trikakud-* "with three peaks, points, or horns" which occurs already in the AthV.; *dvikakud-* "two-humped, a camel" seems much younger). Although such instances can always analogically arise when *dvi-* and *tri-* forms exist at the same time, they show, in addition to other facts, that priority or even influence of a higher numeral is possible. Compounds with *tri-* were very numerous (over 35 in the Ṛgveda, some of them being rather frequent, over 70 in the brāhmaṇas), three being a sacred or symbolical number, those with *dvi-* in Vedic texts strikingly less frequent (about 10 and about 45 respectively). In the Iliad and Odyssey there are 10 compounds with τρι-, 5 with δι-. The stem *tri-* not seldom combined with stems which were also preceded by the stem for "two" or which de-

60) See e.g. M. Leumann, in Leumann-Hofmann, Lateinische Grammatik, München 1928, p. 292.

61) Chr. Bartholomae, Zu den arischen Wörtern für "der erste" und "der zweite". Ind. Forsch. 23, p. 44, n. 1.

62) See e.g. W.M. Lindsay, Die Lateinische Sprache, Leipsic 1897, p. 472. Cf. also Ernout-Meillet, o.c. p. 336 "mais on ne voit pas comment s'expliquerait *du-* s'il n'est pas ancien".

63) See e.g. Leumann, l.c.; Wackernagel-Debrunner, Altindische Grammatik, III, p. 343.

64) Compare the collections of words given by Walde-Pokorny, II, p. 818 ff. and 753 f.

65) K. Rönnow, Trita Āptya, Uppsala 1927, p. XXV; for other opinions see p. XX ff. Cf. also A.B. Keith, The Religion and Philosophy of the Veda and Upanishads, Harvard Univ. 1925, p. 134; A. Hillebrandt, Vedische Mythologie[2], II, Breslau 1929, p. 308; Wackernagel-Debrunner, o.c. III, p. 406 f.

noted entities usually occurring in pairs: *tripad-* "of 3 feet"; *tricakra-* "three-wheeled". In magical, mystical, and mythological speculations etc. the element *tri-* has in all probability already in the prehistoric period played an important rôle [66].

What is more, the word for "three" has already early exercised influence on that for "two" in the series of the ordinals. Among the so-called ordinals [67] the second occupies an intermediate position; on the one hand it is *secundus*, the one following the first or foremost, which has thus far been the only one, unique; on the other hand, it is the first of the elements enabling us to realize a series. Hence the double character and, speaking generally, the twofold origin of words for the "second": many of them are literally "the following" (Lat. *secundus*) or "the other" [68] (Lat. *alter*, Goth. *anþar*; in Swedish *annan, andra*, Danish *anden* both meanings have persisted), but elsewhere "the second" is formed like "the third" etc. In that case this word, besides being conspicuously younger, is not seldom formed like, modelled on, the words for the third, the fourth and so on. Thus the French *deuxième* which is preferably used when the second is not the last, but the member of a series; in a similar way Germ. *zweite* etc. The Indian and Iranian 'second ordinal', Ved. *dvitīya-*, GAv. *daibitya-*, YAv. *bitya*, OPers. *duvitīya-*, which must be regarded as an IIr. innovation, was no doubt an imitation of "the third": Ved. *tṛtīya-* YAv. *θrit(i)ya-*, Lat. *tertius*, Lit. *trẽčias* [69]. The Umbr. *duti* "iterum" has probably borrowed its second element from *tertim* "tertium" (< **tertiom*).

Now the *alter* (and *secundus*) class of ordinals corresponds to a cardinal for two which essentially expresses the idea of 'dualité unité', the *deuxième* class to an abstract numeral two, which is a member of an indefinite series. It is no doubt largely due to the special character of the ordinals and especially to that of the second that the *alter* type should have persisted for so long a time. Are we, however, mistaken in drawing attention to it in a discussion of the history of the lowest cardinals?

In the Ṛg- and Atharva Saṃhitās and in the brāhmaṇas *tris* "three times" is much more frequent than *dvis, duis* "twice"; in the Iliad and Odyssey τρίς is repeatedly found, δίς is a ἅπαξ. Sometimes, both words occur in the same context: e.g. AthV. 5,2,3. As the idea expressed by IE *duis* is like that expressed by **tris* purely numerical ('abstract') the *i* vowel is no great surprise; a word for "two times" deriving from a term expressing a unity of two would be strange [70].

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66) Cf. e.g. A. Bertholet und E. Lehmann, Lehrbuch der Religionsgeschichte[4], Tübingen 1925, II, p. 653, s.v.; Handwörterbuch des deutschen Aberglaubens X, Berlin 1942, (Register), p. 64 f. The reader might also be referred to G. Dumézil, Le troisième souverain, Paris 1950, and to J. Vendryes, L'unité en trois personnes chez les Celtes, Choix d'Etudes, Paris 1952, p. 233 ff.

67) See also my 'Observations on ordinal numbers', in Bingkisan Budi, 'Festschrift' Ph. S. van Ronkel, Leyden 1950, p. 135 ff.

68) See further on.

69) See also Wackernagel-Debrunner, o.c., III, p. 405 f.

70) Being personally averse to glottonic speculations I am not inclined to support one of the opinions pronounced on the nature of the final *s* (see Wackernagel-Debrunner, o.c., III, p. 424); neither of them (plural *s* or ablative ending) is, however, consistent with the hypothesis of a stem *duí-* = *duō̆[u]*, because the latter is essentially a dual.

In a similar way the adverb *tridhā* "in three ways or parts" is in ancient Indian texts more frequent than *dvidhā*. Side by side with it we find *tredhā* "in three ways, triply" and *dvedhā*; instances of the latter are likewise less numerous: in the Ṛgveda where *tredhā* occurs 13 times, it does not appear at all. *tredhā*, beside which we find *trayadhā* has therefore been rightly considered the model for *dvedhā* [71].

In contradistinction to the forms of the so-called cardinals which in Vedic usage are *dvā* and *duvā*, *dvābhyām* and *duvābhyām* etc., the longer forms occurring also in other IE languages [72], *dvi-* in *dvitīya-* "the second", – *dvidhā* and similar words (*dvita-*, see above) are, also in the Ṛgveda, always monosyllabic. This feature which may be held to be an argument in favour of the hypothesis that it was modelled on the *tri*-group, is also a characteristic of *dvi-* in such compounds as *dvipad-*, δίπους, Lat. *bipēs*, OEngl. *twifēte*.

Whereas *dvā-*, the dual form, is retained in the first member of *dvādaśa* and in a limited number of other words, *dvi-* being the regular form in the first member of a compound, the stem used in compounding the Vedic and Sanskrit word for "eight", *aṣṭau*, *aṣṭā*, [73] is either *aṣṭā-* (*aṣṭāpad-* "eight-footed") or *aṣṭa-* (*aṣṭayoni-* "having eight wombs") [74], never **aṣṭi-*. Compare, in Greek, ὀκτώπους, ὀκταπόδης. This may, of course, be due to the existence of a by-stem *dui-* *duei-* 'from the beginning', but one cannot, on the other hand, help remarking that whereas "two" and "three" are successive numerals, "eight" and "three" are not and have no close connection [75]. Moreover, in spite of the parallelism between *ubhau* and *dvau* in the Ancient Indo-Aryan languages a form **ubhi-* does not appear beside *ubhā* (in *ubhākarṇi* etc.), beside *ubhayāpāṇi* etc. [76]) and *ubhaya-* (*ubhayapad-* "having both feet").

A survey of the forms of "eight" used in compound numerals shows that the evidently younger *aṣṭa-* was the only form used in numerals above 100, which are not likely to have been much pronounced in olden times; in the classical language *aṣṭā* was retained in 18, 28 and 38, which, being the lowest members of the series, were, no doubt, more present to the mind than the higher numbers. The compounds beginning with *dvā-/dvi-* run parallel [77]: from 102 onwards *dvi-* is the only form, in 42-92 *dvā-* and *dvi-* are interchangeable [78], in 12-32 *dvā-* is exclusively found. The distribution of these forms is closely connected with the history of this category: compare *trayastriṃśat* "33", but *trayaḥṣaṣṭi* and *triṣaṣṭi* "63". Here, too, *tri-* may have exerted influence on the words beginning with "two": *trayas-* : *tri-* = *dvā-* : *dvi-* [79].

71) Wackernagel-Debrunner, o.c., III, p. 343; cf. also p. 347.
72) See A. Meillet, Journal asiatique 1909, I, p. 551.
73) Which is commonly regarded as a dual form; see Wackernagel-Debrunner, o.c., III, p. 359; A.A. Macdonell, Vedic Grammar, Strassburg 1910, p. 309; W.B. Henning, in The transactions of the Philological Society 1941, p. 12.
74) For particulars see Wackernagel-Debrunner, o.c., III, p. 358 f.
75) The form *aṣṭa-* is explained by the influence of *sapta*; cf. also Lat. *octingenti* after *septingenti* etc.
76) Gaṇa *dvidaṇḍyādi* on Pāṇ. 5,4,128.
77) Cf. Pāṇini 6,3,49 and 47; Pat. Pāṇ. 6,3,47.
78) For particulars see Wackernagel-Debrunner, o.c. III, p. 380 f.; W.D. Whitney, A Sanskrit Grammar [3], Leipsic 1924, p. 178 f.
79) The sense of *tripañcāśaḥ* ("consisting of fifty-three", or rather "consisting of three fifties") ṚV. 10,34,8 being not beyond dispute, we cannot say that *tri-* is used earlier in the documents than *dvi-*.

In connection with these considerations we should remember that in Avestan the influence of the stem *θri-* < **tri-* was likewise widespread: we even find *θridaśa-* "the thirteenth", as against AInd. *trayodaśa-*. In Bartholomae's dictionary about 20 compounds formed with *θri-* are given, as against 11 with *bi-* < **dui̯-*. The latter often occur in the same context as those formed with *θri-*, cf. e.g. Yt. 10,122; Frah. 25 b. In some cases there exists a *bi-* compound without a parallel form beginning with *θri-*: *bizangra-* "two-footed", *bi-pa*ᵗ*tištăna-* "two-legged", both of them being sometimes contrasted to four-footed beings.

As the analogical influence of the stem *tri-* in the historical period may be regarded as certain, we cannot rule out the possibility of its having existed before. It would, however, be difficult to take for granted that the *i* in **dui̯-* is nothing but a borrowing from **tri-* and to consider the many forms deriving from the curious by-form *dui̯-* *duei̯-* *duoi̯-* beside *duōu̯* as arisen under the influence of the higher numeral. The history of the Irish *dē-* in *dēriad* "two-horse team" etc. seems, it is true, obscure [80], but I fail to see how the Germanic group Goth. *tweifls* "doubt", AIsl. *tvīfaldr* "double" etc. [81], for which a base *duei̯-* must be assumed, could have been modelled on a group containing the base **trei̯-*. It is likewise impossible to maintain that the collective form, *duei̯o-* *duoi̯o-* (AInd. *dvayá-*, OChSl. *dvoji̯*, Lit. *dveji̇̀*), and hence AInd. *ubhaya-*, YAv. *uvaya-* [82] were modelled on *trei̯o-* *troi̯o-* (AInd. *traya-*, OChSl. *troji̯*, Lit. *treji̇̀*) [83], although there are as far as I see, no conclusive arguments to prevent one or the other from believing so [84].

There would, perhaps, also be room for the assumption that already in prehistoric times **dui̯-* has a preference for expressing a certain abstract or modern numerical value (including separation and duality of individual entities), *duei̯o-* *duoi̯o-* *duei̯* for conveying a more or less distinct collective sense: cf. on the one hand *duis* "twice" (see above); Gr. δίχα "in two, asunder (δ. τέμνειν etc.); divided; two ways, at variance"; its derivative δισσός etc. "twofold", and (plur.) "two" is almost always construed with the plural, and, on the other hand, apart from the above collectives, such words as OHG. *zwīg* etc. < **duei̯gho-* "twig" [85] the original sense of which was something like (Germ.) "Gabelung". Exceptions are, however, not wanting: OEngl. *twig* "twig" < **dui̯gho-* etc.

So, the upshot of the above considerations seems to be that conclusive arguments in favour of the supposition that *duō[u]* was the

80) See especially H. Pedersen, Vergl. Gramm. d. Keltischen Sprachen, Göttingen 1913, II, p. 127; cf. also Walde-Pokorny, o.c., I, p. 818; J. Pokorny, Indogerm. Etym. Wörterbuch, Bern 1949, p. 229.

81) Unless the influence of *tri-* has been indirect: *tri-*, hence *dvi-*, hence, later, the words for "doubt" etc. See also S. Feist, Vergl. Wörterbuch der Gotischen Sprache, Leyden 1939, p. 485 f.

82) Cf. also Wackernagel-Debrunner, o.c., III, p. 344.

83) See especially Brugmann, Die distributiven und kollektiven Numeralia der indogermanischen Sprachen, Abh. k. sächs. Ges. d. Wiss., ph.-h. Kl., 25, Leipsic 1907, esp. p. 22 ff.

84) We should, however, in discussing numerals always be prepared to admit the possibility of both parallel development and mutual influence of forms.

85) Cf. e.g. F. Kluge, Etym. Wörterbuch der deutschen Sprache, 12-13, Strassburg 1943, p. 721.

primary form, and *dui-* under the influence of *tri-* already early came to express the idea of two as an individual member of a more extended series of numerals (compare the ordinals of the *dvitīya-deuxième* type) are lacking. Yet, the productiveness of the *dui-* forms and the preference for the more 'primitive' dualité unité connotation of the stem *du-* make us question the correctness of Bartholomae's interpretation of Lat. *duplex* etc. [86].

In maintaining the secondary character of Pāli *dutiyo*, Prākr. *duio* "the second" the same scholar [87], following Jacobi's interpretation of Prākr. *duhā* as against AInd. *dvidhā* "in two ways, twofold", [88] was, to all appearance, right, because in these words forms containing *du-* are absolutely unknown. But does it follow that an original *du-* can never be found at all? As is well-known, there exist some ancient features in Middle-Indian which were lost in Sanskrit: the *-dh-* in the adverb *idha* "here" (Skt. *iha*) etc., and the participle *dinna-* "given" seems to betray the prehistoric existence of the present **didāti* (as against Skt. *dadāti*, Av. *daδā^{l}ti*): cf. Gr. δίδωμι [89]. So, the hypothesis of an original *du-* in a group of MIA. words (on the understanding that it is sufficiently supported by arguments derived from other branches of Indo-European) might in itself be possible: *dupaṭṭa* "double cloth"; *dujivha* "double-tongued", *duvassa-* "two years old", *dumāsika-* "two months old" etc. Moreover, the Lett. *du-celes* "a two-wheeled cart" adduced to show the existence of IE *du-* in the first member of a compound [90], but rejected as an argument by Brugmann and others [91], can contain the same element.

It is interesting to notice that in MIA. the form of the base *du-* is repeatedly used in such compounds as clearly denote some representation or other of the 'dualité unité' concept. In Pāli *dujivha-* means "two-tongued", or "a snake", the animal possessing one tongue the end of which is split; a *dupaṭṭa-* is "a so-called double cloth, a cloak consisting of two cloths joined together", *du(v)angika-* means "consisting of two parts". Compare also Prākṛit *dukhura-* "with two, i.e. cloven hoofs". Yet, there is no denying that these forms (which are not found in Ancient Indian), if they have arisen under the influence of the cardinal *duve* (beside *dve*) etc. – which is the alternative –, would be in keeping with the device applied in later stages of Indo-Aryan: beside *dvipad-* "two-footed, a biped" and other such words which come from Sanskrit, Hindi has e.g. *duannī* "a small silver coin worth two annas" [92]. Taking into consideration that the numerous modern locutions beginning with *du- do-* likewise include instances of the special use of "two" with which we are concerned in this treatise (e.g. *duarnī*; *duarthī doarthī* "equivocal", or "ambiguity, double-enten-

86) See above. – Influence of *quadru-* on *du-*, admitted by Brugmann, Grundrisz II^{2}, 1, p. 11, is improbable (**quadrucentī* and other parallels of *du-* forms do not exist; one might expect to find **dupēs* instead of *bipēs* (cf. *quadrupēs*).
87) Bartholomae, I.F. 23, p. 44.
88) H. Jacobi, Ausgewählte Erzählungen aus dem Mahārāṣṭrī, p. XXV.
89) But see also E. Kieckers, I.F. 32, p. 88.
90) J. Endzelin, in Bezzenberger's Beiträge 27, p. 325.
91) Brugmann, o.c., p. 11, n. 1; Walde-Pokorny, o.c., I, p. 818.
92) Compare also S.K. Chatterji, The origin and development of the Bengali Language, Calcutta 1926, p. 785.

dre"; *dumuṅhā* "two-faced, deceitful"), we are the more sceptical about the 'original character' of the above MIA. words.

Leaving this point here, we would make some other remarks on the use of "two" in former periods. As is well known the way in which the values 11 and 12 are expressed often differ from the device used in expressing the numerals from 13 onwards [93]: Gr. ἕνδεκα and δώδεκα, Hom. δυώδεκα, but τρεῖς καὶ δέκα etc., Goth. *ainlif* and *twalif*, but *fidwor-taíhun* "14"; Lat. *ūndecimus*, *duodecimus*, but *tertius decimus*. Besides, 11 and 12 are sometimes connected by analogical processes: AInd. *ekādaśa* with *ā* under the influence of *dvādaśa*. The subtractive method of counting in the third place, almost exclusively [94] concerns those numerals which are a decade less one or two: Lat. *septendecim*, but usually *duodēvigintī*, *ūndēvīgintī* [95]. In these cases "two" has in a striking way characteristics in common with "one", not with "three" or other numerals. Another word which is worth mentioning is the AInd. *dvāpara-* "the 'throw' characterized by the remainder 'two' (in gambling)", the other 'dies' being called *kali-* (which, representing the number one, is the loser); *tretā* "the trey", and *kṛta-* "the lucky or winning throw, representing the number four"; these terms at the same time figure as proper nouns. The word *tretā*, by which in another text the three sacred fires are collectively indicated, literally means "triad". From this fact and from the non-numerical character of the terms *kali-* and *kṛta-* it may, to my mind, be concluded that these numbers were conceived collectively and that, in this connection, 'two' constituted a unity. The origin of the term *dvāpara-* is elucidated by *ekapara-* 'der um eins anders ist" [96].

It was, and sometimes still is, usual in various countries to give something into the bargain: the well-known Engl. *baker's dozen*. Thirteen items sold for the price of twelve, seven for the price of six, such locutions as *a year and a day*, 101 gun shots discharged when a prince is born: the enumeration of instances of this 'extra' unit above a round number, or full space of time would be endless [97]. It should, however, be noted that the extra unit is not always an arithmetical "one", it can be two. In India such numbers as 32, 62, 92 were widely used when a round number with an extra unity is meant, or when a traditionally fixed number of entities is expressed: with the Buddhists 92 is a measure of eternity: 90 + 2 kappas or ages of the world, i.e. a full period of 90 kappas; there are 62 views of heresy; a great being, either destined to be a universal king, or a perfectly enlightened man has 32 characteristic marks; periods of 12 days or 12 years are, also apart from astronomical influences, often mentioned. In

93) As soon as the opportunity presents itself I propose to discuss this point in connection with other problems.
94) For exceptions see Brugmann, o.c., p. 28.
95) The reader may also be referred to Wackernagel-Debrunner, o.c., III, p. 386.
96) See H. Lüders, Das Würfelspiel im alten Indien, Abh. Gött. Ges. Wiss., 1907, p. 64 = Philologica Indica, Göttingen 1940, p. 169 f. Was this scholar right in contending: "Für *tretā* hätte man ebenso auch **tripara-* sagen können"? Why then, has the collective *tretā* been expressed?
97) In the ŚatBr. 3,9,3,34 the one which exceeds an even number "remains over for... prosperity".

Bṛhadār.upan. 2,1,19 72000 channels (leading from the heart to the pericardium) are mentioned; Chānd.Up. 8,7,3; 10,4 a period of 32 years, but 11,3 a period of 101 years. ŚatBr. 12,2,3,3 it is argued that "a metre does not perish from excess or deficiency of a syllable (*nākṣarāc chando vyeti*), neither from one nor from two (syllables)". Compare also such passages as AitBr. 4,19 *ekapañcāśataṃ dvipañcāśataṃ vā śastvā...* "having recited 51 or 52". In the ancient Greek literature we also find two as unit in connection with decimals used, if I am not mistaken, in such a way as to indicate a complex plus an additional pair: not to mention the number 12 which is rather frequent, the 22 vessels mentioned by Homer, Il. 2,748; the 52 boys mentioned Od. 8,35 etc.; like 11, 22 is more than once used in hyperbolical statements: Il. 15,678; 23,264; Od. 9,241 [98]. In ancient German traditions, in folklore and superstition the numbers 22, 32, 42, 72 often occur, whether they may be attributed to the tendency to add two to a decad, or to other reasons: 72 kinds of fever, 42 fatal days [99]. It would perhaps be worth examining whether the remarkable rôle played by the number 18 in Indian thought and in various provinces of the Indian literature, the origin, or origins, of which have not yet been elucidated in a satisfactory way [100], may partly be due to the fact that 18, besides being interesting from the mathematical point of view (it is 2 x 3 x 3, or 2 x 9, divisible by 2, 3, 6 and 9, etc.), and besides being 10 + 8 (cf. the numbers 108, 1008, 88, etc. in Indian texts), constitutes two decades less two. The number 20 is likewise used as an addition to a full number: we only mention the Celtic "long hundred" as a case in point (six scores in number or 112 lbs.) [101], as against "a short hundred", i.e. five score.

There are other facts to be discussed. In the ancient Greek texts words derived from the element **dṷō[u]* repeatedly serve to express such connotations as may be regarded as related to the concept of 'dualité unité'. Gr. δοιοί δοιώ are not only 'epic synonyms' for δύο in the sense of "two, both", but also expressive of the idea of 'state or arrangement of two elements so as to form a pair or to produce the sense of belonging together' [102]: the two Dioscuri are, e.g., styled δοιὼ... κοσμήτορε λαῶν (Il. 3, 236); the brothers Agamemnon and Menelaos δοιὼ δ''Ατρεΐδα (19,310); compare also Od. 5,476 δοιοὺς δ'ἄρ' ὑπήλυθε θάμνους / ἐξ ὁμόθεν πεφυῶτας· ὁ μὲν φυλίης, ὁ δ' ἐλαίης: the shrubs were two but they sprang from a root in which both of them formed a single whole with their complement. This use is too striking to be fortuitous. In a considerable number of cases this word, while referring to doubleness in general, is followed by an epexegetical specifica-

98) "22, eine augenfällige Hyperbol, wozu die Zahl 22 (und auch 11) vorzugsweise gewählt wird", Faesi-Hinrichs.
99) Cf. Handwörterbuch des deutschen Aberglaubens, X (Register), p.415.
100) O.Stein, The numeral 18, in the Poona Orientalist, I,3 (1936), p. 1 ff.
101) H. Pedersen, Vergl. Gramm. der kelt. Spr. II, p. 130. Was 'twelve' (the only identical prehistoric numeral in the series 10-20 is *dvádaśa* : δώδεκα etc.) a 'long ten'? For twelve and the long hundred see also F. Sommer, Zum Zahlwort, Sitzungsber. München, ph.-h.Kl. 1950, 7, p. 64 ff. For ModGr. ἑξήντα δύο and χίλια δύο, ibidem, p. 71.

tion of the two components: Il. 4,7 δοιαὶ μὲν Μενελάῳ ἀρηγόνες εἰσὶ θεάων / Ἥρη... καὶ ... Ἀθήνη; 3,236; 5,206; 24,527; Od. 10,84 etc. The young derivative δοιάζω δοάζω means "to consider in two minds, be in two minds" "to have a mind to, imagine, doubt": cf. the rare δοιή "doubt, perplexity": Il. 9,230 ἐν δοιῇ "in dubio", which cannot be disconnected from AInd. *dvaya-* [103]: *dvayyaí* (dat. fem.), *dvaya-* meaning "twofold, double; couple, pair; twofold nature, i.e. falsehood" [104]. Although these words originally were so-called collectives – we only recall such Slavic derivatives as Russ. *dvójni* "twins"; *dvójka* "pair"; *dvojník* "twine (subst.)" [105]–, they came to be used as cardinals in connection with nouns of a plural character (pluralia tantum) in Lithuanian: *dvẽjos knỹgos* "two books" and Slavic. As our forefathers had a special liking for 'counting' or expressing themselves in groups, such locutions were often applied where we would expect a cardinal: Hom. Od. 4,128 f. ὃς ... δῶκε δύ' ... ἀσαμίνθους, / δοιοὺς δὲ τρίποδας, δέκα δὲ χρυσοῖο τάλαντα. The idea of 'doubleness' or 'occurrence in pairs' being more common than that of 'triad' there is no Greek counterpart of AInd. *traya-* "triple, consisting of three; triad", Lit. *trejì*, OChSl. *trojь*.

The 'ensemble' concept is also obvious in the Greek reduplicative δίδυμος: the Pontus and Bosporus are called a διδύμα ἅλς (Soph. Ant. 967); a δίδυμον ξύλον is "a forked piece of wood"; in an inscription (I.G. 14, 1974) it reads τὸ γλυκύ μοι δίδυμον of a wife; χερὶ διδύμᾳ means "with both hands" (Pind. P. 2,9). The word is further used to denote "the testicles" and, mostly "twins". A word for "threefold" and "trigeminous", τρίδυμος, was modelled on δίδυμος, which gave also rise to the curious ἀμφίδυμος "twofold, double": Od. 4,847 λιμένες ... ἀ. "havens with an entrance on both sides"; further, ἰσθμὸς ἀ.; ἄκοντες δ. "with two barbs".

103) J. Wackernagel, Nachrichten d. Ges. d. Wiss. zu Göttingen, 1914, p. 119 ff.; Walde-Pokorny, I, o.c., p. 819; Pokorny, o.c., p. 231; Brugmann, Grundrisz^2, II, 2, p. 76 ff.; cf. also Boisacq, p. 193.

104) For particulars see Wackernagel-Debrunner, Altind. Gramm. III, p. 420 f.; Brugmann, o.c., p. 79 f.

105) See E. Berneker, Slavisches etymologisches Wörterbuch, I, Heidelberg 1914, p. 247.

IIIa

'Primitive' man, i.e. natural man so far as rationalistic tendencies and intellectual or 'modern' onesidedness do not dominate, thinks and acts collectively. "Society has seized upon a large number, if not all possible relations... of man to nature and of man to man" [1]. A man is in many respects seen as a part of society; he belongs to society, not to himself alone. Without his fellows the individual is nought. A clan or village can even be an almost sacred entity, the members, or rather parts, of which are bound to each other by special ties. This fellowship of the community is often of so great a moral, social, and religious importance that we have to give it our careful consideration when studying the languages concerned. With regard to the phenomena under discussion these observations imply that such concepts as "a single individual" are not the same in a primitive society as with us. But singleness and community, individuality and community conditioning each other reciprocally, the linguistic discussion cannot be limited to one of the terms concerned.

With Melanesian peoples man and all things belonging to him are seen as parts of society, or of the collectivity, to such an extent that "the other man, the other" is part of the totality, "fraction d'un ensemble" [2]. In a village each man is another man, each house another house. It would not be possible literally to render our "a man". But it is not only the indefinite pronoun which is wanting, these peoples also do without an exact equivalent of our numeral 'one'. One is not the first integer in our modern sense but part of a whole, "fraction d'un ensemble"; when this ensemble is two, one is seen as a part, a component, of two. With them, "un n'est pas une qualité d'unité, mais d'altérité" [3]. This way of looking at the society to which one belongs is often accompanied by a striking indifference to any knowledge of the exact number of its members [4].

As this point was, as far as I know, never illustrated by linguistic evidence taken from various families of languages it may be worth while to discuss it at some length.

In the first place the phenomenon that words for the fellow-tribesmen or clansmen, for members of the same community at the same time serve to render our "other(s)" is not confined to Mela-

1) A. Goldenweiser, Anthropology, New York 1946, p. 314; 407 ff.; see also e.g., K. Birket-Smith, Geschichte der Kultur, Zürich 1946, p. 255 ff.; J.Ph. Duyvendak, Inleiding tot de Ethnologie van de Indische Archipel[2], Groningen-Batavia, p. 106 ff.; H. Frankfort etc., Before Philosophy, Harmondsworth 1949, p. 18 and passim; G. van der Leeuw, Religion in essence and manifestation, London 1938, p. 242 ff.; van der Leeuw, L'homme primitif et la religion, Paris 1940, p. 34 ff. For recent descriptions of societies in which these tendencies are still existent or preponderant see V. Elwin, Bondo Highlander (India), Oxford 1950, p. 24 ff.; M. Hermann, Die Nomaden von Tibet, Vienna, 1950, p. 227 ff.

2) M. Leenhardt, Langues et dialectes de l'Austro-Mélanésie, Paris 1946, p. XXXV, who refers to his paper La personne mélanésienne, Annuaire de l'Ecole pratique des Hautes Etudes, Section des Sciences religieuses, Paris 1942, p. 14.

3) Leenhardt, Langues..., p. XXXV.

4) Cf. e.g. A. Sommerfelt, La langue et la société, Oslo 1938, p. 193.

nesia. In Hebrew עָמִית not only means "fellow-clansman, man or people of the same people or class, kinsman, friend, neighbour", but also "fellow-man" in general, and also, emphatically, "another" and, further, "the other in a dispute, the adversary or opponent". It can even be applied to lifeless objects, just like *tappātu* "female partner" in the Amarna-texts (296,19). To our "(the) one... (the) other" corresponds a locution literally meaning "a man... his fellow-tribesman" (אִישׁ עָמִיתוֹ). The word אָח "brother, kinsman, fellow-clansman, friend" is used in the same way, even in connection with lifeless objects. Similar turns occur in other Semitic languages: the Ar. *ṣāḥib* which is usually rendered by "companion", has much wider connotations: "person to whom... refers, person in charge of, man of, person possessed of... etc." and a sentence like "the man has killed his *ṣāḥib*" should be interpreted as "one man has killed the other". The Assyrian *aḫu* "brother, neighbour, fellow-man" also does duty for our "one another", Germ. "einander": *aḫu aḫa; aḫu ana aḫi* means "einander, einer dem andern, einer gegen den andern"; *aḫi (u) aḫi* is equivalent to "some and others; part of... the other part". In Sundanese and other IN languages *lawan* refers to "the person or the object which belongs to..., the equal, match, peer, companion", including "the adversary, opponent, competitor". Sometimes it is equivalent to our "counterpart" or, exactly, "supplement": Mal. *teh lawan-nya susu* "milk (*s.*) goes with tea" (lit. "tea its supplement is milk"). In Javanese, besides "opposing party", the meanings of the word are "together with; and also". It recurs in Paulohi (Ambon group of IN languages) to denote "friend, companion": *lahane*, but *lahani* lit. "his *lahane*", which means "the other", must be the identical word. Thus it is not surprising that the Javanese should use the word *kanca* "comrade, mate, fellow, colleague" (also used in phrase for "wife") for "another" when a living being belonging to the same group is meant; "A. with (and) the others" is rendered by *A. sakanca-né* lit. "A. with his fellows". As is well known words of this semantic sphere have also existed, and still persist, in the language of working men, bargees, seamen etc.: the Dutch *maat* and the Engl. *mate* which can also stand for "one of a pair", is often used among them for "companion, fellow-workman" or "assistent to some official" in those cases where an outsider would resort to a phrase with "other": "the other man or labourer". There is an IE parallel: Irish *aile* means "other" and "second", but "the other of two" can also be expressed by *a chéle* which literally means "his fellow, partner, companion".

When any man is another man, it is not surprising that a word for "quidam" is at the same time translatable by "alius" or by an indefinite article. Thus the Tuareg *îen* [5]. The Old Buginese (Indonesia) *masiṅ* "other" can scarcely be disconnected from the Malay *masiṅ* "separate, singly" and *masiṅ-masiṅ* "each", which is cognate with Mal. *asiṅ* "other than, distinct"; *oraṅ asiṅ* "stranger". In Bolaang-Mongondow (IN; Celebes) *ibanya* means "other, others, some", i.e. "alius" and "quidam"; *tobatu'* is "one object (plant, animal, man)", but also "a certain; another, (the) one, the other, each"

5) My colleague H. Wagner drew my attention to this instance.

[6]). In the language of the community of Erai (Wetar, Indonesia [7]) the word *eha* means "some, somebody" as well as "another, somebody else": *la ili eha* "in some other village"; the same word serves as a numeral: "one"; the turn *eha... eha* "one... the other, each other" expresses reciprocity; *eha eha*, however, means "each separately, each by himself, each of them". The Pasthu *tsok* means "anyone, some, some one", *tsok... tsok* "some... others", *bụl tsok* "another" (*bụl* "another, the other"), *nor tsok* "others" (*nor* "the rest, more, others") [8]).

In the Vedic *tva, tua* which evidently goes back to the Indo-Iranian period [9]) the meanings "many a one" (cf. ṚV. 1,152,2; MS. 1,4,14; 63,15), "another" (cf. ṚV. 1,113,5: *tvam: ayam ekaśabdaparyāyaḥ sarvanāmaśabdaḥ* Sāyaṇa) are likewise combined. The word is often found twice: *tya-... tya-* "one... another"; *nemas u tvas* (ṚV. 8,89,3) means "the one and the other, many a one".

It would be needless to repeat in this connection the remarks made by other authors [10]) on the *-tero-* derivative of the IE. deictic element *e-*: Av. *atāra-* "this of the two"; Alb. *játerε jatrε* "the other"; Umbr. *etro-* "alter"; OChSl. *eterъ, jeterъ* "someone". The same connotations are, or were, to a certain extent, also expressed by such words as the Engl. *one* which besides emphasizing indefiniteness (colloquial Dutch *éne A.* = a certain A.), can, as opposed to *another one*, mean "the other, another".

It is a well-known phenomenon that the indefinite very often developed out of a numeral for "one": in the Rāmāyaṇa and later documents Skt. *eka-* "one" can be equivalent to "a"; in late Greek εἷς "one" takes over the function of τις "quidam, aliquis"; Lat. *unus* > Fr. *un*; in Middle English the OE. *ān* "one, a" differentiated into *ōn, ō* when stressed: "one" and *a, an* when unstressed: "a", etc. This semantic process is, as far as I am able to see, younger, the indefinite function of words for "other" older. That our forefathers, like many of those who speak languages other than the Indo-European, could dispense with an indefinite article is no doubt also to be attributed to the frequent use of words like *anya-*, ἕτερος etc. [11]).

In OChSl. the stem *oi̯no-* "one", besides being at the root of *inokъ* "solus" (~ Goth. *ainaha*, Lat. *ūnicus*) and *inogъ* "μονιός" (~ AHGerman *einag*) survived in *inъ*, which as a regular numeral for "one" is superseded by *jedinъ* (which is explained as "just one" [12]),

6) For particulars see W.Dunnebier, Bol.Mong.-Nederlandsch Woordenboek, The Hague 1951, p. 408.

7) See J.P.B. Josselin de Jong, Studies in Indonesian Culture II, Amsterdam 1947, p. 95 f.

8) According to D.L.R. Lorimer (Pasthu, Oxford 1915).

9) For particulars see Wackernagel-Debrunner, o.c., III, p. 575 f.; Delbrück, Altindische Syntax, p. 26 f.

10) See e.g. Walde-Pokorny, I, p. 99; Walde-Hofmann, I, p. 208 f.; Wackernagel, K.Z. 55 (1928), p. 109; H. Jacobsohn, Arier und Ugrofinnen, Göttingen 1922, p. 208 A.; N. Jokl, I.F. 36, p. 115; WZKM. 34, p. 41 etc.; Meillet, Études sur l'étymologie et le vocabulaire du vieux slave, Paris 1902-1905, p. 406.

11) See L. Renou, Grammaire sanscrite, Paris 1930, p. 385; Wackernagel, Vorlesungen über Syntax[2] II, Basel 1928, p. 150 ff.; Leumann, Lat. Gramm., p. 482.

12) See Brugmann, in Ind. Forsch. 23, p. 311; E. Berneker, Slavisches etym. Wörterbuch, Heidelberg 1908-1913, p. 262, and especially Brugmann, Die Demonstrativpronomina der indogerm. Sprachen, Abh. Sächs. Ges. d. Wiss., ph.-h. Kl. 22 (1904), p. 12;82 ff.; 110 (see also S. Feist, Vergl. Wtb. d. gotischen Spr., Leyden 1939, p. 300 with the relevant literature).

expressing itself the meanings of "some, one, a, a certain" and "other (alter, alius)"; like the numerals 1 and 2 it falls into the pronominal declension. In MHG. and Swiss dialects the word for "one" *ein* itself expresses as an indefinite pronoun the idea of "a certain" [13].

One may suspect the use of the word for "human being(s)" in the sense of "others" of being connected with the point under discussion. This phenomenon occurs in many Indonesian idioms: Tontemboan (N. Celebes) *tow* "human being(s), people": *e tow* "of others, of other people" (in opposition to "own, one's own"); Mal. *oraṅ* "human being", but *anak oraṅ* "another man's child"; *nĕgĕri oraṅ* "foreign countries". In a similar way, the Jav. *woṅ*, Bare'e *tau* etc. In Kulawi (Celebes) *tauna* is used for "man, men" and for "others", *tau* being "human being(s)" and *-na* the possessive pronoun (third person; see further on). In the idiom of the island of Roti (Indonesia) "somebody" is expressed by *tou*, which is as to its origin identical with the above word for "human being" in many cognate languages; but as a translation "another" is often more correct. The Chamoro (IN) *pālo* stands for "sonstig, übrig, ander; mehrere, einige, ein wenig" [14]. In Javanese *woṅ akeh* "men, man, one, the public" (*woṅ* "human being, *akeh* "many") is also used to express the idea of "the others (in general), the general body of the people".

Holger Pedersen [15] at the time collected some IE instances of words which in addition to the meaning "people" express the idea of "other" or "foreign": Slov. *ljudski* "foreign": *ljudje* "people"; Alb. *botë* "people", but especially "foreign people, foreign, belonging to another", etc. The same scholar tried to connect the Hitt. *damais* "other" with the Gr. δᾶμος δῆμος "people", Ir. *dam* "suite, crowd", adding some non-IE parellels, e.g. in Chechen, an idiom of the North-Easth Caucasian group: *nāx*, gen. *nēxiю* "people : *nēxiю* "foreign" [16].

A device widespread in Indonesia may be illustrated by the following instances: Jav. *woṅ siji... siji-né* "one... the other", lit. "one human being"... "his other", *-né* being a suffix for "his, her, its, their; the"; "another, the other" (of two) is also *siji-né*; Sund. *hiji-hijina* lit. "one, the one of it", i.e. "one the other" means "one and the other, both of the two" (*na* the possessive suffix); Ledo (Celebes) *saito* "one" (of men): *saito-na* "other, the other"; *saṅu* "one" (of big animals etc.): *saṅu-na* "(the) other" etc. [17].

This device is in perfect harmony with such expressions as Bare'e (an Indonesian language of Celebes) *sa-mpaṅa* "one branch": *sa-mpaṅa-nya* "another branch" (*sa* indicating the unit or oneness, *-nya* being the poss. suffix). In the same idiom *tau sa-lipu* is

13) W. Braune, Beiträge z. Gesch. d. deutschen Spr. u. Lit., Halle, 12, p. 393 ff. and L. Tobler, ibid., 15, p. 380 ff.
14) H. Costenoble, Die Chamoro Sprache, The Hague 1940, p. 229.
15) H. Pedersen, Hittitisch und die anderen Indoeuropäischen Sprachen, Copenhagen 1938, 52 ff.
16) Pedersen refers to Schiefner, Tschetschenzische Studien, p. 65.
17) For particulars see S.J. Esser, Handleiding voor de beoefening der Ledo-taal, Bandung 1934, p. 54; 60.

"quite a village (*lipu*) of people", but *tau sa-lipu-nya* "people of another village". In Kulawi (Celebes) *hadua* "(the) one" correlates to *hadua-na* "the other". There is no difficulty in assuming that such locutions are an outcome of the same tendency which leads many Indonesian speech-communities to say (Bare'e) *ŋgaanya* lit. "the yolk of it (i.e. of the egg)" i.e. "(the) yolk", *kabosenya* lit. "the great one belonging to it" (from *bose* "big, great") formerly "the head of the village" (now "a freeman"). In general the sense of this possessive suffix may be put on a par with that of a definite article, but it should be observed that in many cases the word concerned denotes a part of a whole, so that *-nya* refers to that whole: *ratu-nya* "the windfall (of a tree)" [18]. In Old-Javanese *lyan* denotes "other" and "foreign"; in modern usage *liyan* means "belonging to another group, country, people, etc."; when combined with the possessive suffix the word stands for our "another than, other than". It recurs in other IN languages in similar meanings: e.g. Gayo (Sumatra) *len* "other, foreign, deviating, divergent".

In Bolaang-Mongondow (Celebes) *tobatu'* means "one specimen (human being, animal, plant, object), one entity", but also "a certain, one" or "other, the other", and "every, everybody". In Chukchee, an American Indian language, the same element expresses the ideas of "other, another" and of "a certain" [19]. In the Ethiopian Tigriña *ḥaḍe* means "one, the one", and "the other", *ḥadã*^{2} "some (quelques, quelques uns)" [20]. In the same way, according to information given by Father Drabbe, Marind (a Papuan language of New-Guinea) *isi* "other" and "some, several". In Chinese, *ī kó* expresses indefiniteness whereas *ī kó ... ī kó* stands for "one, ... the other".

In the Mori language of Celebes *asa* is not only "one", "the one", but also "(the) other": *asatowa* refers to "the one bank (of the river)" as well as to "the other bank". Yet the suffix *-no* (possessive third person) can be a means of emphasizing the latter 'connotation'. The same word also serves as an equivalent to "each, everybody, everyone", of our indefinite article and of "one" in the sense of the first numeral; doubled and followed by a possessive suffix it answers to our "alone": *asa*^{2}*ku* "I alone". Further, it can have the sense of our "one and the same", and when forming a unity with the word to which it belongs that of "entire, whole". It is, in the Indonesian languages, a widespread feature that the prefix *sĕ-, sa-* which combining with words which, while being indifferent to the category of number, are seen as referring to a unit that integrates a part of a whole or totality, helps to express that idea of unit (compare Mal. *oraṅ* "human being(s)": *sĕ-oraṅ manusia* "a (single) human being"), but in combination with a word meant to convey the idea of a whole or totality helps to express its completeness (compare Mal. *sa-umur-ku* "all my life").

18) For further particulars see N. Adriani, Spraakkunst der Bare'e-taal, Bandung 1931, p. 344.
19) W. Bogoras, Chukchee, in Handbook of American Indian Languages II, Washington 1922, p. 732.
20) W. Leslau, Documents Tigrigna, éthiopien septentrional, Paris 1941.

In this connection attention may be drawn to the Hindi word *joṛ* which, deriving from an older **yoṭayati* "to bind" (cf. Skt. *juṭati, juḍati* "id."), means "joining, junction, union, join, joint, accretion, combination, society", and further "pair", but also "equal, match, mate, partner"; the related *joṛā* stands for "joining", for "a pair, couple, a pair of shoes, a suit of clothes", and for "one of a pair, fellow, mate, match, counterpart, partner, consort (wife or husband)"; *joṛī* likewise means "partner, consort" and "pair, couple". The same combination of meanings "pair, couple" and "one of a pair etc." appears in various Indonesian words such as the Achehnese *pasaṅ* "pair, couple", and "equal, match" (in cognate languages the word means "pair, couple, set"); the Ach. *babat* "equal, match, be suited to each other" and "pair, couple"; and especially in the Gayo (likewise in the island of Sumatra) *judu* "match, partner, counterpart, one of a pair, fellow (of one other person), the man or girl who is intended for a young woman or youth", and also "a couple, pair". The cognate Ach. *judõ* has similar meanings: husband and wife are each other's *judõ*; besides, the word means an "even number of multiple of two". In cognate languages such as Malay, the meaning "match, second self, the other of a pair, counterpart, destined mate" prevails. The Tamil *tuṇai* conveys the same variety of meanings: "company, association; help, aid, support, protection; partner, companion, mate; escort, helpmate, friend; pair, couple; two; husband, wife, mate; brother, sister; similitude." [21].

These words remind us of the well-known Lat. *par*, adj. "equal, on a par with", subst. m. f. "partner, equal", subst. n., usually plural *paria* "pair". The two connotations of the substantive "pair" and "the other of a pair" survived in the Dutch *paar* which was borrowed from the Latin. It would appear to me that the original sense of this word was "existing in pairs, going by pairs", in connection with one of the partners as well as with both of them [22]. Compare also the Skt. *yama-* "twin, one of a pair or couple" and as a neuter also "pair, couple"; *yamaka-* "double, twin", and "a double bandage (med.), a 'paronomastic' figure (poetics)"; Pāli *yamaka-* "twin, twin child" and "pair, couple".

Already in 1896 Conant [23] drew attention to the connection existing between words for pair (pairing, coupling, matching and, in addition to these, names of natural pairs as feet, eyes, wings) and the numeral "two": "perhaps the first glimmering of any real number thought in connection with 2 comes when the savage contrasts one single object with another or when he first recognizes the pair."

In contradistinction to such turns of speech as *one... another*; *some... others* etc. many peoples usually or exclusively resort

21) The question arises whether the IN, *judu*, such Dravid. words as the Tam. *tŏṭu* "collection, assemblage", *tuṇai, cāṭu* "bundle of leaves" and the above Indo-Aryan terms *joṛā* etc. are etymologically related. The remarks made by F.B.J. Kuiper, Proto-Munda words in Sanskrit, Amsterdam 1948, p. 131, do not carry us any further.

22) I am inclined to subscribe to the view expressed by Ernout-Meillet[3], p. 852 "étymologie inconnue".

23) C. Conant, The number concept, 1896, p. 74 f. and 92.

to constructions in which both members are identical. In Indonesian idioms we find e.g. *luma... luma* in Rotinese, and *esa* "one": *esa... esa* "the one... the other" in the same language; *sĕmbau... sĕmbau* in Sangirese; *sae... sae* in Paulohi; *sabae... sabae* "one side... the other side" in Bimanese; in Toba Batak (Sumatra) *sada* is "one", also "one, the one, the former (of two persons)", but if the former has already been mentioned the same *sada* can refer to the other, second or latter of them. The Busang (Borneo) *bale* means "some, part of (them)", but in using this word people always implicitly think of the complement, i.e. the other(s); *bale... bale* "some (of them)... (the) other(s of them)"; *bale* can also mean: "something, another thing" when referring to the deficiency or remaining part; the phrase *dĕha' bale* stands for "others, other people" (*dĕha'*: "people, men, inhabitants, adherents", and also pers. and poss. pron. third pers. pl.).

In the Negro-African languages our word "other" is rarely rendered by a distinctive word when it means "another"; the idea is generally expressed by "one...one" [24], for instance, Ewe *bú búbŭ* answers to the Engl. "one, the one", but also to "another, the other"; when repeated, the word helps to form an equivalent of the Latin *alter... alter* construction. In Yabem, one of the Melanesian languages of New Guinea, the word *teŋ* "one" also stands for our "someone, some" (plur.); *teŋ... teŋ* means "one... the other", and the single word can be found for "another" [25]. In the same way in the Papuan Marind: *rah* "(the) one or (the) other (of a pair or couple)", *rah aṅgib teb* "naris altera".

A very instructive group of words is found in the Indonesian Bare'e (Celebes): here *wa'a* means "all, entire, universi, omnis, totus", *wa'anyamo* (*-nya* poss. suffix third person, *-mo* an emphasizing element) is equivalent to such English turns as "that's an end to the question!, and that's that!, so there!" (no doubt < "completely"); the derivative *samba'a*, however, conveys the meanings "one, one piece or part", "a" (indefinite), and "other"; *samba'a... samba'a* is "one... the other". As the prefix *sa-* expresses the idea of 'unity' (but *sambote* is not only "the one bank (of a river)" but also "the other") we may conclude that here the units are seen as a part of the whole and that in these terms no difference is made between "one" and "the other".

24) L. Homburger, The Negro-African languages, London 1949, p. 100.
25) O. Dempwolff, Grammatik der Jabêm-Sprache auf Neuguinea, Hamburg 1939, p. 31 f. and 44.

It would appear to me that many particulars in connection with the word for "other, another" in the ancient IE languages when they differ from modern usage may be considered as having resulted from this mode of thinking and speaking. The Irish *alaili* "others" is also used in the sense of "some, certain (pl.), quidam, aliqui". In such sentences as Iliad 2,75 ἄλλοθεν ἄλλος ἐρητύειν ἐπέεσσιν; Odyssey 18,301 ἄλλο δ' ἄρ' ἄλλος δῶρον ... ἔνεικεν, ἄλλος must be translated by "quisque; each". The Skt. *anya-* is not infrequently equivalent to our "a": *anyasminn ahani* "one day"; cf. also *kālāntareṇa* "after some time"; *anyadā* "one day, once, sometimes" (also "at another time") [1]; *anyedyus* "once" and "one day". In these locutions *anya-* is stated to mean "one of a number", or "a": "ein (als unbestimmter Artikel)" [2]. It does duty for an indefinite word. In ṚV. 10,146,5 *ná vā́ araṇyā́nīr hanty anyáś cén nā́bhigáchati* Sāyaṇa explains: *anyaḥ vyāghracaurādiḥ*; the word *anya-* is rather vague and almost equivalent to "some being or other". In popular Sanskrit texts *anya-* in the sense of "some, a certain, quidam, irgendeiner" is not rare. Compare also Pāli *aññatara* "one of a certain number, a certain among many, a certain, somebody, some, any" and often "a"; *devaññatara* "a certain god".

The German *ander*, lat. *alter* and similar words originally corresponded to "der eine von beiden" [3]. In Lat. *alter* and *alii* a meaning has been preserved which has, as far as I am able to see, incorrectly been regarded as metaphorical: "fellow-man, neighbour": *qui alterum incusat probri, eum ipsum se intueri oportet.* As we have seen this use of *alter* is well-known under the circumstances described, i.e. when man belongs to a society, the members of which are each other's 'others'. A similar use of Gr. ἕτερος is found in the New Testament: "fellow-man, neighbour"; the originally Greek character of this use is, however, highly dubious [4]. It may be observed in passing that such other words for the same concept as Gr. οἱ πέλας "one's fellow-creatures", likewise impress us as having originated under similar social circumstances [5]. The modern equivalent of Gr. οὐδέτερος is, in a comparable way, not a locution containing the word other, another, but "neither of the two", Fr. *ne... personne, aucun*, of two men or objects etc.

If I am not mistaken the well-known and much discussed so-called 'pleonastic' or anticipatory pleonastic use of words for "other" in various IE languages still awaits comprehensive treatment [6]. It must be now generally be conceded that such verdicts as "Verstosz gegen die Logik", "Fehler im Ausdruck" [7] are wide of the

1) Cf. also Wackernagel, KZ. 55 (1928), p. 109.
2) Boehtlingk-Roth, Petr. Dict. I, 262.
3) See also O. Behaghel, Deutsche Syntax I, Heidelberg 1923, p. 446 f.
4) See e.g. E. de Witt Burton, A critical and exegetical commentary on the Epistle to the Galatians, Edinburgh 1921, p. 333.
5) It is worth noticing that the related πλησίος "near, close to" is often followed by the word for "each other": πλησίαι ἀλλήλων, evidently expressing a complementary idea.
6) For bibliographical reference see also M.Bloomfield, American Journal of Philology 38 (1917), p. 6 f.; W. Havers, Handbuch der erklärenden Syntax, Heidelberg 1938, p. 217 f.
7) Thus A. Tobler, Vermischte Beiträge zur französischen Grammatik III, Leipsic 1908, p. 82 f.

mark. For the older periods the phenomenon does not come under such heads as pleonasm or blend (contamination) either. In close parallelism Sanskrit (including Vedic), Avestan, Greek, Latin, ancient German idioms etcetera used the words *anya-*, ἄλλο- etc. in such a way that they admit of a translation "furthermore, also, in addition, on the other hand" but not of a modern "other": Rām. 1,27,21 *etair anyaiś ca... rājaputraiḥ* (the *ete* are no princes); Odyssey 2,412 μήτηρ δ' ἐμὴ οὔ τι πέπυσται, οὐδ' ἄλλαι δμωαί; Livy 5,39,3 *circa moenia aliasque portas*; ONo. Sn.120 *vaxa sem annat hâr*; compare the Mod.No. locution *som en annen tyv* "like a thief"; in English up to comparatively recent times (± 1600): *both preestis and othere laymen*; a German instance (XVIth century) *da lag er wie ein ander Schwein* [8]. In dialects the locution has survived [9]. We might, moreover, compare the well-known English use of *another* in such sentences as: *the time allotted to each paper will be 20 minutes plus another 10 minutes for discussion.*

There is of course no denying that the word for "other" is liable to occur in 'contaminations' [10] or 'pleonastic' phrases: many instances of similar constructions with German *übrig*, Engl. *all the other* (*St. Paul's is the greatest of all the other London churches*) could easily be adduced [11]. Part of the cases enumerated in the relevant discussion, and especially the modern instances, are no doubt due to so-called alogical factors of this description. But in the older stages of the IE languages the phenomenon is too widespread to be explained in this way even if we would readily admit that an original blend has analogically spread to become usual. So this usage must already have prevailed in prehistoric times. It is, however, in perfect harmony with the above-mentioned thinking and the social circumstances.

I would, therefore, for the time being prefer to explain the usage in the following way: in the Homeric instance the female inmates of the house constitute a group, a collectivity, of which the mother and the serving-women are the components or complementary parts. In a similar way: Curt. Ruf. 3,9,6 *uxor materque regis et alius feminarum grex* and many other instances. The Homeric serving-women are per se the 'others' of the mother. The mother is, on the other hand, the other of these women – compare such constructions as, in Sanskrit, Daśak. 1,40 *bhidyamānam ivāśaktas trātuṃ anyo nago nagam*; ṚV. 7,36,2 *inó vām anyáḥ* (i.e. Varuṇa) *padavír ádabdho jánaṃ ca mitró yatati bruvāṇáḥ*; 2,22,2; 3,

8) Other instances may be found in: Boehtlingk-Roth, Petr. Dict. I, 262; Thieme, Der Fremdling im Ṛgveda, Abh. Kunde Morgenl. 23 (1938) p.7; A.Minard, La subordination dans la prose védique, Paris 1936, p.123; Chr. Bartholomae, Altiranisches Wörterbuch 137 f. (who incorrectly speaks of "ungenaue Ausdrucksweise"); R. Kühner – B. Gerth, Ausführliche Grammatik der Griech. Sprache II^3, 1, Hannover-Leipsic 1898, p. 275; R. Kühner – C. Stegmann, Ausf. Grammatik d. lateinischen Sprache I, Hannover 1912, p. 651; Grimm, Deutsches Wörterbuch I, s.v. ander.

9) See e.g. Schmeller, Bayerisches Wörterbuch I, 100; Schweizerisches Idiotikon, I, 302 f.

10) "Eine Mischung... die dem franz. *nous autres Français* entspricht, gemischt aus *nous autres* und *nous Français*", O. Behaghel, Deutsche Syntax, I, Heidelberg 1923, p. 450. For the French phrase see however K. Nyrop, Grammaire historique de la langue française V, Copenhagen 1925, p. 214 (cf. also p. 396 f.).

11) See Havers, o.c., p. 34.

55,4; in Latin, Livy 29,33,7 *duae turmae haesere, altera metu dedita hosti, pertinacior in repugnando telis obruta et confixa est* (H.J. Müller proposed: *altera pertinacior...*) – , and hence the well-known and widespread constructions *anya-... anya-, alter... alter* etc. "(the) one... the other(s)", to which we shall have to revert – cf. e.g. ONo. Grimn. 1,2 *Hraudungr... átti tvá sonu, hét annar Agnarr, en annarr Geirrøðr* –; and Plato Symp. 220c ἄλλος ἄλλῳ ἔλεγεν, and on the other hand: RV. 7,82,5 (dedicated to Indra-Varuṇa) ... *mitró váruṇam duvasyáti, marúdbhir ugráḥ śúbham anyá* (i.e. Indra) *īyate*; 1,30,19; 8,22,4; and Livy 3,37 *virgis caedi* (sc. *alii*), *alii securi subici*, in German Otfr. Evang. 2,7,23 ... *thero zueio ander uuas Petruse gilanget*. Whereas, then, such phrases as τις ἄλλος in Od. 11,558 οὐδέ τις ἄλλος αἴτιος, ἀλλὰ Ζεύς ... are consistent with the sense of ἄλλος supposed in the above argument, the turn Iliad 2,80 Ἀχαιῶν ἄλλος and the phrase 6,476 Ζεῦ ἄλλοι τε θεοί, which in the course of time came to prevail, can, if we are correct in our hypothesis, be considered a special use, or contained the germs of a shift of meaning, although such passages as Iliad 1,423 ff. Ζεὺς ... χθιζὸς ἔβη κατὰ δαῖτα. θεοὶ δ' ἅμα πάντες ἕποντο, where Zeus and the gods (i.e. in our manner of expressing ourselves: the other gods) are opposed [12], may show us that these constructions, too, admitted of being interpreted 'in the ancient way'. [13]

It is convenient here to say a few words about the use of the word for "other" in the ancient documents. In the Ṛgveda such turns as *murderers and other criminals; we have our ordinary business and many other things to do besides*, do, properly speaking, not occur. The word *anya-* occurs 184 times; the well-known construction *anya- ... anya-* 30 times; *eka- ... anya-* once; *anyaḥ ... anyam* etc. (in different cases) in more than one sentence: 10 times; *anyaḥ ... anyam* etc. in the same sentence: 14 times; *anya-anya-* connected and expressing alternation: 3 times; *anya-* in the sense of "one of the two" 11 times; *anya-* with ablative over 20 times; the plural in the sense of "the others": 16 times. This evidence makes it clear that *anya-* when expressing the idea of "he who is (those who are) the (each other's) complement" is very frequent. The substantive use prevails, also in such cases as 1, 52, 13 *satyám addhā́ nákir anyás tvāvān*, where *anya-* means "another". Although the idea of "someone who is different or something different" is, as might be expected, evident in this passage and many others, instances showing the idea of mutual completion are far from wanting. Such cases of an attributively used *anya-* as the following are especially interesting: 10, 119, 11 *divíd me anyáḥ pakṣó 'dhó anyám acīkṛṣam* "one side... the other" (cf. st.7); 6, 47, 21 *divé-dive sadṛ́śīr anyám árdham kṛṣṇā́ asedhat*; 3, 32, 11

12) In a similar way ŚatBr. 14,2,2,8 where the *devāḥ* are opposed to Indra.

13) It may be observed in passing that such phrases which are psychologically understandable continue to exist: in the Dutch universities *rector en senaat* denotes the presiding member and the other members of the chief deliberative body (*senate*). A person who is distinguished from or opposed to the other members of the group or body to which he belongs is very apt to become, in the estimation of his fellowmen, a being of his own special kind.

anyáyā sphigyā "with the other buttock or flank"; the substantives themselves denote entities which occur in complementary pairs. In a similar way: 5, 29, 10 *anyác cakrám... anyád*. The Vedic poets repeatedly refer to celebrating priests or institutors of a sacrifice other than those with whom they have entered into relations themselves, asking the gods not to accept the invitations of "the others": 2, 18, 3 *yájamānāso anyé*, where Sāyaṇa explains: *madvyatiriktāḥ*. The original idea underlying this phrase seems to have been this: all the sacrificers, those belonging to their own circle as well as those belonging to other families, clans or circles constitute a whole, a body; those denoted by *anye* are those who in a way complement the former group. Compose also 3, 35, 5; 4, 44, 5; 7, 69, 6; 10, 160, 1, and 8, 5, 13 *mó ṣú anyắn úpāratam* (without a substantive). In a comparable way the gods Indra and Agni are stated to be superior to all other beings: 1, 109, 6 *préndrāgnī víśvā bhúvanāty anyā*; cf. 2, 35, 8 and 10, 82, 3. 8, 19, 33 the poet makes mention of Agni's "other fires": *yásya te agne anyé agnáyaḥ...* 7, 1, 14 *agniḥ* and *anyān agnīn* are opposed, i.e. on special fire and other fires. 10, 124, 3 *páśyann anyásyā átithiṃ vayắyāḥ*. In these cases the entities designated by *anyo-* belong to the same genus and species as the entities from which they are distinguished. In connection with 10, 81, 6 where *múhyantv anyé abhíto jánāsaḥ* is contrasted with *ihắsmắkam maghávā sūríṛ astu*, the *janāsaḥ* and *vayam* both being living human beings, it may be observed that the extremely frequent word *jana-* "living being, man, person, race, people, a number of persons collectively" is, it is true, used to denote "mankind, man (in general)" (cf. e.g. 1, 92, 17; 130, 5), but often also applies to a limited number of men, to a family, tribe or race; cf. also 1, 84, 17 *kás ... ádhi bravat tanve kó jánāya*; 117, 6. Sometimes both entities or groups of entities under discussion belong to the same genus (which is not expressed), but not to the same species. Then the so-called pleonastic construction is used: 10, 27, 21 *ayáṃ yó vájraḥ... śráva íd enā paró anyád asti*.

As already stated the turn *murderers and other criminals* in which both categories are species of the same genus, the former being explicitly designated and the genus indicated in the second member of the combination, does not occur in the Ṛgveda. The idiom in connection with *anya-* expresses a complementary idea without referring to the common attributes of a higher class by mentioning the generic term. Those texts in which the genus at first sight seems to be expressed, admit of another interpretation: Ṛgveda 10, 142, 7 *apắm idáṃ hyáyanaṃ samudrásya nivéśanam| anyáṃ kṛṇuṣvetáḥ pánthām...* "make yourself a path elsewhere", the abode mentioned in the first half of the verse being, strictly speaking, no path; it cannot even be considered a path for the fire, because it is the home of the sea. 10, 117, 4 *pṛṇántam anyám áraṇaṃ cid ichet* it opposed to *ná sá sákhā yó na dádāti sákhye* etc. the verbal ideas being nearly identical. Compare also 10, 142, 1.

Some other passages are worthy of special mention. The turn of speech found ṚV. 10, 64, 2 *ná marḍitā vidyate anyá ebhyo* "no comforter other than they" may have exerted influence on the spread of the above construction in which *anya-* was attributively

used to qualify a generic term (cf. also 8, 80, 1 *nahy anyám ... marḍitāram ...*).

Turning now to the Atharvaveda we find some instances of the use of *anya-* in connection with the generic term: when comparing 1, 30, 3 and 3, 11, 7 (cf. 5) which 8, 2, 27 and 11, 6, 16 it becomes evident that the poets who are speaking here admit the existence of a hundred-and-one deaths or, rather, causes of death, one of which was old age: hence 1, 30, 3 and 3, 11, 7 opposing old age to *śatam anyān... mṛtyūn* may be adduced as instances of the said turn. The so-called pleonastic use of *anya-* is not absent: 2, 29, 3; 7, 35, 1 *prānyānt sapatnānt sahasā sahasva.*

In the brāhmaṇas the construction "murderers and other criminals" is repeatedly used. Thus we find in the Śatapatha: 1, 1, 3, 12 *tad yad evaiṣām atrāśuddhas takṣā vānyo vāmedhyaḥ kaścit parāhanti* "whatever belonging to them some impure one, either a carpenter or some other person who is unfit for sacrifice, touches (desecrated by touching)..."; 4, 3, 5, 9 the adhvaryu, sacrificer, *āgnīdhraḥ ... yo 'nyaḥ paricarò bhavati* "... and whatever other attendant (of the adhvaryu) there is"; 10, 2, 4, 6 the brahman consists of seven syllables, *ṛc-* being one syllable, *yajuṣ-* two, and *sāman-* two, *yad ato 'nyad brahmaiva tad dvyakṣaraṃ vai brahma* "and what brahman there is in addition to these, that is just the brahman of two syllables". Yet a text like 12, 5, 2, 15 *putro vā bhrātā vā yo vānyo brāhmaṇaḥ* may be explained as: either a son (of the deceased), or a brother, or some other person, who is a brahman. Compare also the passage 3, 1, 1, 1 *sa yad eva varṣiṣṭhaṃ syāt taj joṣayeran yad anyad bhūmer nābhiśayīta*, instead of which the Kāṇva recension has ... *varṣiṣṭham bhūmes tad eva devayajanaṃ syād yatrānyad bhūmer* ... Elsewhere the generic term is unequivocally absent: 3, 5, 1, 16; 4, 2, 3, 7; 3, 3, 11.

There is another point to be discussed with regard to the Sanskrit *anya-* and similar words, to wit their being attended by an ablative. According to Speyer [14] and other scholars "all words meaning "other" or "different", as *anya-, itara-, apara-, bhinna-*, are construed with the ablative of comparison. Delbrück, though expressing himself in a much less definite way in his Altindische Syntax [15] is, in the relevant volume of the Grundriss [16], of the same opinion. So are some authors of recent books on Greek and Latin syntax [17]. There is, however, room for the observation that the comparative in the "modern" sense of the term is a comparatively young phenomenon. On the other hand, the close connection between the more general or more original ablative of separation or the ablative expressive of the idea of "on what side, with respect to" [18] and the more special ablative of comparison is

14) J.S. Speyer, Sanskrit Syntax, Leyden 1886, p. 78 and 160; the same, Ved. und Sanskrit Syntax, Strassburg 1896, p. 17.
15) B. Delbrück, Altindische Syntax, Halle a. S. 1888, p. 113.
16) Delbrück, Vergleichende Syntax der indogermanischen Sprachen, I, Strassburg 1893, p. 216.
17) E.g. Ed. Schwyzer, Griech. Gramm. II, München 1950, p. 98.
18) See e.g. Speyer, S.S., p. 77.

often explicitly asserted. Yet, Pāṇini already drew a distinction between the ablative *apādāne*, the same case in connection with such words as *anya-*, and the 'ablativus comparationis' (Pāṇ. 2, 3, 28; 29; 42). As, according to the same authority (1, 4, 24 ff.) *apādāna-* "ablation, removal" designates, in a general way, the object which remains in its own place when another object is removed from it, that is to say as this term comprises the applications of the ablative when there is question of a being or an object removing or being removed from another being or object which remains in its place – the various particular applications apart from *jalād utthitaḥ* "arisen, appearing from the water" being explicitly related in the sūtras 25 ff. [19] – as, further, the ablativus comparationis is expressly defined as occurring in those cases in which there is question of "taking out or specifying one object out of many" (*nirdhāraṇam*) with regard to an object which at the same time is not included in the whole envisaged (*vibhakte*, cf. 2,3,41; 42) – for instance *māthurāḥ pāṭaliputrebhya āḍhyatarāḥ* "the inhabitants of M. are richer than those of P." –, it results that neither definition applies to the abl. attending *anya-*. Now the rule given in sūtra 29 applies to the following cases: 1. words for "other": *anyo Devadattāt* "another than D."; *bhinno bhrātṛbhyaḥ* "different from his brothers"; 2. *ārāt* "far from" (or "near"): *ārād grāmāt* "far from the village"; 3. *itara-* "other, contrary to": *śuklād itaraḥ* "contrary to white, i.e. black"; 4. *ṛte* "without, with the exclusion of": *ṛte Devadattāt* "without D."; 5. the words denoting the quarters of the sky: *pūrvo grāmāt* "to the east of the village", including *pūrvo grīṣmād vasantaḥ* "spring is earlier than, precedes summer"; 6. the words formed with *-añc-*: *prāg grāmāt* "to the east of the village"; 7. the adverbs ending in *ā* or *āhi*: *uttarā* or *uttarāhi samudrāt* "to the north of the ocean". In this enumeration the categories 5-7 clearly bear upon spatial relations. The person or the locality being to the east of the village is situated in the same area, in the same portion of extension as the village from which he, or it, is distinct and with regard to which he, or it, occupies a place in the eastern direction. There can, however, be no denying that *ārāt* (above, n° 2) which expresses the idea of indefinite direction and distance must be put on a par with these words; its ablative form and the coexisting locative *āre* "far (away), outside, far from, near" lead us to assume a noun *āra-* "distance". As to *ṛte* (n° 4) the general sense expressed by it is not only "with the exclusion of, excepting, without", but also "in default of, failing" and "apart from". If I am not mistaken, the meaning mentioned last is the basic sense of the word, from which the other connotations derive [20]. ŚatBr. 4,1,4,2 and 3 *te haite agre nānevāsatuḥ, brahma ca kṣatraṃ ca. tataḥ śaśākaiva brahma mitra ṛte kṣatrād varuṇāt sthātum* etc.;

19) See also L. Renou, La grammaire de Pāṇini, Paris 1948 ff., I, p. 42 f.; the same, Terminologie grammaticale du Sanskrit, I, Paris 1942, p. 48.

20) Three etymologies of this word have come to my knowledge: that proposed by Böhtlingk and Roth, Pet. Dict. I, 1056: *ṛta-* "truth etc.", which for semantical reasons is utterly improbable; that suggested by Monier-Williams' Dictionary s.v. and by Viśva Bandhu Śāstri, Vaidika-Padānukramakośa, II, Lahore 1935, p. 308, who enters it under the root *ṛt-* "going, hating, avoiding, shunning"; a dative is how-

14,2,2,3 "this is Indra's special share: as there is a share for a chief, so is this his share apart from the other gods" (*evam asyaiṣa ṛte devebhyaḥ*); 3,4,1,11; 13,3,3,6 *yad vau kiṃ ca naśyaty antaraiva tad dyāvāpṛthivī naśyati ... naitābhyo devatābhya ṛte kiṃ cana naśyati* "whatsoever is lost, is lost within heaven and earth; ... and nothing whatever is lost out of (the reach of) these deities" [21]. The sense of "not including" is also obvious in ŚatBr. 11,1,6,29 *pañceme puruṣe prāṇā ṛte cakṣurbhyām*. RV. 9, 69, 6 *néndrād ṛté pavate dhāma kíṃ caná* "he flows off to no place separate from Indra('s), i.e. other than Indra('s)". AitBr. 1,27,1 Speech proffers her services to the gods, who are desirous to obtain Soma: "I shall become a woman, purchase Soma by means of me"; the gods answered "no, how should we exist apart from you, i.e. without you? (*tvad ṛte*)". In other texts the same idea of separation is obvious: GopBr. 2,1,17 *na vā ṛta āvāgbhyām evaitad yūpaṃ prārthayata*; ChāndUp. 5,1,8 etc. *sā ha vāg uccakrāma... katham aśakatarte maj jīvitum* "Speech went off... How have you been able to live destitute of me, unaccompanied by me?"; cf. ŚatBr. 9,2,1, 15; BĀrUp. 5,12,1; AitUp. 3,11. In the Ṛgveda- and Atharvaveda Saṃhitās the word is repeatedly found in sentences stating that without a definite god man can do nothing; "without", being expressed by *ṛte*, is clearly "apart from, destitute of": cf. e.g. RV. 1,18,7; 10,112,9; AthV. 4,26,6; see also ŚatBr. 2,2,4,13. Hence also the connotation found in such passages as Yājñ. 2,134 *duhitṝṇāṃ sutād ṛte* "in default of, failing the son of daughters".

As to the word *itara-* mentioned by Pāṇini, there can be no doubt that it is often used to emphasize a contrast. Its use in compounds is to call something the contrary of its opposite: *dakṣiṇetara-* "left"; cf. also *dvijetara-* "of a class other than that of the twice-born" [22]; this usage is well known. In dvandva-compounds, and then inflected as a noun [23] it likewise denotes the contrary idea: *sukhetareṣu* "in pains and pleasures"; so in antithetic phrases: *vijayāyetarāya vā* "to victory or defeat". The use of *itarad* for "whereas, whilst" is in keeping with this function. However, another connotation, to wit "this one in contradistinction to a person or object which has just been mentioned" is not rare: RV. 10,16,9 = AthV. 12,2,3 *kravyādam agníṃ prá hiṇomi dūrám... ihaívāyám ítaro jātávedāḥ...* "I send far away the flesh-eating Fire..., here let this other Fire..."; cf. also RV. 10,18,1 = AthV. 12,2,21 "go away, O death, along a distant road which is thine own, other (*itara-*) than that upon which the gods go". Compare also ŚatBr. 3,6,3,13; 5,4,4,9 etc.; in the plural: 1,3,1,9. Cf. the locution *itarātman-* ŚatBr. 1,8,3,17; 19. The same sense is expressed by *itarathā* "in a contrary manner, on the other hand": ŚBr.

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ever only very seldom used adverbially (see e.g. W. D. Whitney, A Sanskrit grammar, § 1113; L. Renou, Grammaire sanscrite, p. 158); and, in the third place, that upheld by Walde-Pokorny, Vergl. Wtb. I, p. 142; from the combinations given there I would retain the relation between this word and AInd. *ṛdhak* and *ardha-* which have been discussed above.

21) Thus J. Eggeling, The Śatapatha-Brāhmaṇa translated, in S.B.E. 44, p. 347.

22) See also Renou, Grammaire sanscrite, p. 112.

23) Pāṇini, 1,1,3.

6,8,1,8 *evaṃ devatre tarathā mānuṣe* "so (it is done) with the gods, otherwise in human (practice)"; 8,7,2,10 *tad dhai tad eva citasya cācitasya ca vijñānam evam eva cita itarathācitaḥ* "and thus we have to distinguish between a built and an unbuilt (altar): such-like is the built one, different from it the unbuilt one". Other applications worth mentioning are: AthV. 3,11,5 and 7 "the other (*anya-*) (causes of) death which they call the *itarāṃ chatam*, not so much "the remaining hundred" (Whitney-Lanman) as "the 'contrary' hundred", i.e. the hundred causes of death which in contradistinction to the one cause, which (str.7) is called "friendly, gracious, kind, blessed" (*bhadrā*), to wit the infirmity of old age, compose another class [24]). It may even be supposed that *itara-* in this phrase has the same euphemistic shade of meaning as in the well-known term *itarajanāḥ*, which denotes a class of demoniacal beings who seem to constitute a kind of spirits of darkness; [25]) see e.g. AthV. 8,10,28 where Whitney and Lanman translate "the other-folks". The euphemistic use also appears in the meanings "low, vile, rejected", found in later texts and lexicographical works [26]). - The difference between *itara-* and *anya-* may be illustrated by ŚatBr. 1,6,3,27 *anena ha tvevājāmyājyasye taraṃ puroḍāśasye taraṃ tad anyad ivetaram anyad ivetaram bhavati* "in this way repetition (of performance) is avoided: the one consists of butter, and the other of a rice-cake, hence the one is different from the other". The word *itara-* which doubtless derives from the pronominal stem *i-*, etymologically speaking expresses the idea of "this one in contradistinction to (one which has been indicated or mentioned before, or which is contrary to it)"; "this and not that": cf. e.g. AthV. 3,10,4 *iyám evá sā́ yā́ prathamā́... āsv ítarāsu* "this same is she which first...; among these other ones..."; ŚatBr. 13,8,2,9 *tad dakṣiṇodasyaty udag itarad* "to the right side he removes this (plough and team), to the left (side any) other", "he thus keeps the divine separate from what belongs to the fathers"; cf. also 4,6,9,11 "on the hinder shaft of the northern cart... or on the northern hip of the uttaravedi [27]), but the other is more proper": *itaraṃ tu kṛtataram*; cf. also 1,3,4,10.

These facts are fairly consistent with the fundamental function of the IE suffix *-tero-* which while in a general way emphasizing a difference, helps to form words which characterize a position as distinct from another; it often qualifies ideas of a spatial (or temporal) character [28]). We should in this connection also notice the use of AInd. *antara-* with the ablative: ŚatBr. 5,2,1,8 *kauśaṃ vāsaḥ paridhāpayati... antaraṃ dīkṣitavasanāt* "he makes her wrap round herself, adjacent to, outside of, over, the garment of consecration, a cloth made of kuśa grass" (*tasmād bahiḥpradeśe, antaraśabdo bahiryoge vartate* Sāyaṇa); and BĀrUp. 3,7,3 *yaḥ pṛ-*

24) The Engl. *contrarious* can also mean "adverse" or "unfavourable".
25) In the Vādhūlasūtra (see W. Caland, Acta Orientalia 6, p. 106) *anyajana-* appears instead of *itarajana-*.
26) Words of this meaning are very apt to become "euphemisms": Gr. ἄλλως "otherwise than right, wrongly" etc.
27) The reader may be referred to W. Caland et V. Henry, L'Agniṣṭoma, Paris 1906, p. 74.
28) See especially E. Benveniste, Noms d'agent et noms d'action en indo-européen, Paris 1948, p. 115 ff.

thivyāṃ tiṣṭhan pṛthivyā antaraḥ "who, dwelling in the earth, yet is other than the earth".

Turning now to the words mentioned first in Pāṇini's sūtra 2,3, 29 we should above all study the word *bhinna-* which is especially interesting for semantical reasons. The original sense of AInd. *bhid-* is "splitting", compare also the etymologically identical Lat. *findĕre* which in contradistinction to *scindĕre* expresses the idea of splitting or dividing into two parts in accordance with the natural joints or configuration of the object split: *equus ungulis fissis; findĕre lignum* etc. The verbal adjective *bhinna-* means "broken" (e.g. *bhinnabhāṇḍa-* "a broken vessel" Manu 4,65); also of a ship which makes water (AthV. 5,19,8); "separated, divided in feelings etc., alienated, estranged": compare the instructive passage Mbh. 1,29,15 ff. where the person speaking argues that two brothers after dividing the paternal estate (which first was undivided: *ekastha-* lit. "standing together, conjoined") begin to quarrel so that they become *bhinnāḥ* "separated, estranged". Hence also *dānabhinna-* "set at variance by bribes" (Hitop. 4,39). With these connotations that of "different" is closely related: cf. e.g. Kāl. Ragh. 2,50 *mahītalasparśanamātrabhinnam ṛddhaṃ hi rājyaṃ padam aindram āhuḥ* "they say that a prosperous kingdom is identical with the realm of Indra, only differing in that it stands in contact with the earth"; Mārk.Pur. 110(113),8 *anyāni cānye jīvanti bhinnajātimatāṃ satām* "and different (other) feelings, different persons exist when folk exist of separate (different) castes"; Kāl. Ragh. 6,30 *bhinnarucir hi lokaḥ* "people differ in their tastes" is explained by the commentator Mallinātha in the following way: ... *ruciram api kiṃcit kasmaicin na rocate*. According to the *bhedābhedavāda* (the theory of transcendence and immanence of Brahman) in Indian philosophy the universe is separate and not separate, different and not different, from Brahman: unity-in-difference. "Separateness" or "difference" (*bheda-*), this theory holds, has in it the characteristic of identity (*abhedadharmaś ca*): the waves are different from the sea, but also identical with it; *tasmāt sarvam ekānekātmakaṃ nātyantam abhinnaṃ bhinnaṃ vā* (Bhāskaryabhāṣya 2,1,18). In the stage-play Prabodhacandrodaya 53, 10 B. it reads: *jagan mitho bhinnam abhinnam īśvarāt* "the 'creatures' are different (separate) from one another, but not different (separate) from the Lord". These instances may suffice to show that the word *bhinna-* expresses the idea of "being distinct, different from, other than" – which is, as far as I know, not found in the oldest texts – as a natural consequence of its primary and more general sense: "split, divided, cut asunder, disunited (from a whole, from one object, coherent group of objects etc.); split off, separated (of an object from another object to which it belonged or with which it was connected or formed a unity)". There can be no doubt that the ablative attending it at least originally was a pure ablativus separationis.

Another word to be mentioned here is *vyatirikta-* which side by side with *atirikta-* primarily means "reaching beyond, excessive, too much": the verb *ati-ric-* stands for "to reach beyond, to surpass (acc.)" – the intransitive forms meaning "being in excess", cf. ŚatBr. 12,2,3,6 *na vā ātmāṅgāny atiricyate nātmānam aṅgāny atiricyante* "neither is the body in excess of the limbs, nor are the

limbs in excess of the body" –, and further "to be greater, more, worse etc. than" (abl.), e.g. Bhagavadg. 2,34 *akīrtir maraṇād atiricyate* "ill-fame exceeds death" i.e. "is worse than death"; *vyatiric-* also occurs in the sense of "being disconnected from, parting with" and "distinguishing oneself from, standing out from", *na vyatiric-* means "to coincide, to be conterminous" [29]. Hence *vyatirikta-* also means "being beyond, exceeding, surplus, distinct (from), different (from), free from, other (than)". It is, if need be, attended by an ablative.

A more original meaning of *para-* "other" – which is undoubtedly related to *parā* "away, off, aside, along", to Gr. πέρᾱ "beyond, further; more (than), exceeding, above, higher than," [30] construed with a genitive which in Greek succeeded the original ablative; πέρᾱν πέρην "on the other side, across" (with the gen.), and also = πέρᾱ; περαῖος "on the further side or bank", ἡ περαίη (sc. γῆ, χώρα) "the farthest quarter, i.e. the West, or the East, or the southern hemisphere", and other words; to Osc. *perum* "without" [31] which is in all probability identical with Skt. *param* (the neutre of *para-* used adverbially) "beyond, after, afterwards, however, otherwise etc.", and to the indeclinable Skt. *parás* "beyond, further, off, away; afterwards, in future", (with abl.) "beyond, on the other side of, exclusive of, except, without" which is identical with the Av. *parə̄, parō* "apart from, except, beyond" – on the other side, on the farther side, ulterior, distant, remote (in space), far, opposite, beyond". Hence the words could express the opposite of "own, one's own, oneself": "foreign, adversary, enemy, other, different etc." [32]. When expressing the idea of "another" it is often opposed to *avara-* "nearer", *sva-* "own, one's own", *ātman-* "self, oneself" and similar words [33].

It is no matter of dispute that *apara-* primarily likewise applied to spatial oppositions. This word is etymologically related to Got. *afar* "after" and the German words which belong to it, and is rightly considered a derivative of the IE indeclinable *apo* "away from": AInd. *apa*, which, in Vedic usage, as a particle or adverb means "away from, on the outside of, with the exception of, without" (it can be construed with an abl.) and, further, as a prefix to nouns and verbs, "away, off" and similar connotations; Gr. ἀπό "from, away from, far from", hence "alien from" (also "without"), and as a verbal prefix "away, off, asunder; ceasing from", etc. etc. The word *apara-* is, often in opposition to *pūrva-* "being before, in front, first etc." used to express the ideas of "posterior, later, latter, following, second, western", and, as

29) Texts may, for the sake of brevity, be found in the Petr. Dict. VI, 346.

30) Cf. also Walde-Pokorny, o.c., II, p. 32; J.B. Hofmann, Etymologisches Wörterbuch des griechischen, München 1950, p. 263.

31) See C. D. Buck, A Grammar of Oscan and Umbrian, Boston 1904, p. 206 who appositely compares the use of the Engl. *beyond* "on the further side (of)" (originally "over there") in the sense of "out or reach": *beyond doubt = without doubt*. Compare also the German OHG. *suntar* etc. (see above).

32) It may be noticed that *paraṃ śatam* means "a hundred with a surplus" i.e. "more than a hundred".

33) Compare also *anya-* together with the adverbial *paras* RV. 10, 129, 2 *tásmād dhānyán ná paráḥ kiṃ canása* "other than that there was not anything beyond".

opposed to *sva-* "own, one's own": "other, another, different" [34].

We may therefore conclude that there is much wisdom in the way Pāṇini dealt with these words, giving them their places immediately after the sūtra 2,3,28 *apādāne pañcamī* and separating them from 2,3,42. The function of these words for "other, different" must originally, i.e. in the earliest stage of development accessible, have consisted in expressing spatial-deictic- [35] oppositional relations with regard to a person or an object which corresponds to the idea called *apādāna-* ("an object from which another object is removed" Pāṇini 1,4,24) in sentences of the type *grāmād āgacchati* "he arrives from (the direction of) the village", *jalād utthitaḥ* etc. This person or object and the other(s) were in a more or less distinct way considered as forming a whole, a completeness [36]. In the few Avestan passages where *anya-* is attended by an ablative the original character of this construction is in general still evident: Y. 19,18 *āṇhąm daiiyunąm yå aniiå Rāŋōiṯ..* lit. "of these countries which (are) other than Ragae", i.e. "the countries with the exception of Ragae"; Y. 45,11 (Gāth.) *anyāṇg ahmāṯ yā hōi arāṇm maⁱnyātā* "the others with the exception of him who adequately complied with him"; 46,7.

It can therefore scarcely be considered a matter of chance that the word under discussion and related terms in other ancient IE. languages are remarkably often used in connection with words for spatial, local or geographical concepts. The well-known phrase recurrently used by Darius (Inscr. Beh. A I 41; 47; 67 *utā pārsa utā māda utā aniiā dahiāya* "Persia and Media and the other provinces"), such Avestan instances as *anya-* used in connection with a place, a tract of land, a way, an abode, a house, a door, water – cf. also NÏr. 109 *antarə hāθrəmčiṯ aēte anya upa.isaṯ* "innerhalb eines h. (i.e. a measure of distance) soll man dies (to wit *barəsman-* "the bundle of sacred twigs") und jenes (*aēsma-* "firewood, fuel") suchen" [37]. The passage Vend. 7,4 is also worthy of attention: *asnyehe pasčaēta anyehe raθwō* lit. "in the next other space of time relating to the day", i.e. "in the next period of the day". This phrase may to a certain extent be compared with the Gr. πλησίος ἄλλος.

There are further obvious points of contact between the ancient Iranian *anya-* and its Indian equivalent in that the former often applies to entities which constitute a complementary part of a whole: *dahma-* "the instructed real member of the Zoroastrian community"; *haδo.gaēθā-* "housemate"; *maγa-* "one of the set of holes to be dug for the sake of purification"; *avarətā* "possession(s)", etc., *ratu-* "space of time".

It is therefore not surprising to find that the Lat. *alius* is very often used in connection with such words as *locus* "place,

34) For texts see the Petr. Dict. I, 285 f.
35) This term is of course to be taken in the linguistic sense.
36) It may, for the sake of illustration, be added that the ideas of being separate, different, and "other" go together in languages of another family, e.g. in Busang (Borneo), where *dap* = 1. "separate, detached (from the group to which one belongs, from one's congeners) retiring, secluding oneself from society"; 2. "isolated, detached"; 3. "alone, without a mate or companion"; 4. "other, otherwise, unusual, strange, different"; 5. "self, by itself, of one's own accord".
37) Chr. Bartholomae, Altiranisches Wörterbuch, 136.

locality", *urbs* and *oppidum* "town", *regio* "district", *civitas* "state, people", *orbis terrarum* "the earth", *tempus* "time", *dies* "day", *pars* "part, portion", and other vocables of this description [38]. As to Greek we may refer to the comment given by Ebeling as early as 1885 [39]: "ἄλλος... proprie videtur dictum esse de loci aliqua indefinita diversitate, ut ἄλλος negetur eodem loco esse quod illud cui opponitur. Sed a loco fit transitus ad alia, ut statum et tempus".

Other arguments can be adduced in favour of the hypothesis that the words Skt. *anya-*, Lat. *alius* etc. [40] originally did not express a comparative idea in the traditional sense of the term. With Lat. *alius* various constructions are possible: abl., *quam*, but also *praeter* (Plautus, Most. 400 *nec nobis praeter med alius quisquam est servos*): as *praeter* originally meant "en avant de, au delà de, voran bei zweien, an... vorbei etc." [41] *alius praeter me* probably was "another before me, apart from me > other than me". I would suggest explaining the phrase *alius et* in a comparable way: as appears from Skt. *ati* "beyond, on the other side of, Fr. au delà", Av. *aiti*, OPers. *atiy* "id." etc. the original sense must have been similar: further, beyond (> besides, over and above that etc.). Compare also such constructions as *alter ab illo* "the second after him".

Moreover, the Latin *alius* admits of the same construction as words expressing identity, equality, similarity etc. (*idem, aeque, pariter* etc.): *alius* or *aliter ac* like *aequus ac si* "equal to, of the same ... as"; *idem ac (si)* "the same as"; *pariter* "as much as, equally", *similis atque* "similar to". The original sense of *atque* assumed by Ernout-Meillet [42], to wit "et d'autre part", may be considered as fairly well represented in such texts as Plautus, Epid. 403 *divortunt mores virgini longe atque lupae.*

38) See the long list given in the Thesaurus Linguae Latinae, I, 1626 f.
39) H. Ebeling, Lexicon Homericum, Leipsic 1885, p. 83.
40) As to the possibility of etymological connection between these words see F. Sommer, Ind. Forsch. II, p. 3; Brugmann, Demonstrativpronomina, p. 107; Wackernagel-Debrunner, Altindische Grammatik III, p. 580, § 265a.
41) Cf. also Ernout-Meillet, o.c., p. 937 and Leumann-Hofmann, Lat. Gramm., p. 516.
42) Ernout-Meillet, Dict. étym.^{3}, p. 94.

The monosyllable **(sem-) *som-* is, as an autonomous word, found in some eastern IE languages. In Tocharian the indeclinable *sam* means "equal, alike, even", G. "gleich, eben", Fr. "uni, égal" [1]; it is, inter alia, used in connection with teeth, arms, a road, thought, etc. The rare Ancient-Iranian *ham* [2] evidently means "together": cf. Vend. 5,27 "when men who live together (*hāmō.gāṭvō*) lie down together on the bed, together on the cushion": *nipaiδyeinte ham vā paiti stairiš ham vā paiti barəziš*. In the ancient Indian texts *sam* is used in a similar way: ṚV. 2,16,8; 8,97,12; 1,6,3. Compare also *saṃtarām*, e.g. ṚV. 8,33,19 *saṃtarā́m pā́dakaú hara* "keep your feet well together"; ŚatBr. 3,4,3,2 *saṃtarā́m áṅgulīr ā́ñcanta saṃtarā́ṃ mékhalāṃ* "they turned in their fingers more tightly and drew their girdles tighter". However, another connotation appears to be present too: AV. 7,16,1 (VS. 27,8 etc.) *sáṃśitaṃ cit saṃtarā́ṃ sáṃ śiśādhi* which, in my opinion, means "however sharpened, sharpen him more completely" [3]; ṚV. 8,13,2 *sá prathamé vyòmani... sám apsujít* Sāyaṇa is probably right in elucidating *sám* by *samyak* "completely, wholly, thoroughly"; cf. also 10,85,23 *sáṃ jā́spatyáṃ suyamam astu* (cf. 5,28,3c, AV. 7,73,10c etc.) "let there be a well-ordered house-headship" the idea of completeness and conclusiveness is not absent either.

The corresponding functions of IIr. *sam* when functioning as a verbal prefix are well-known: with *i-*, *dvar-* "go", *fras-* "ask", *darəž-* "fasten" Av. *ham* conveys the idea of "together"; with other roots that of "completely" stands out: *kṛ-* "make, perform": *ham-kṛ-* "perform"; *ham-taš* "to make (thoroughly)"; *ham-gam-* is "to meet together" and "to become complete". Although the functions of Skt. *sam-* are well-known it may be of use to quote some compounds for the sake of illustration: *saṃvāsa-* means "dwelling together, cohabitation; a common abode, association, company", *sam-ā-dhā- manas* "to collect the thoughts or concentrate the mind in meditation", and without the accusative also "to devote oneself entirely to.."; *samuccheda-* "utter destruction"; *saṃ-tap-* "to heat thoroughly, to consume utterly by burning"; *saṃrāva-* "clamour, uproar, loud cries"; *saṃkṣobha-* "a violent shock, jerk, overturning"; etc. the Indian grammarians were right in paraphrasing the sense of *sam-* by *ekī-bhāva-* "combination", i.e. not only "joining together", but also "forming a whole or unity": as opposed not only to *vi-* "apart, asunder", but also to *apa-* "off, away" [4]. We can only account for all the connotations expressed by such compounds as *samartha-* "adequate, fit, suitable, competent, a match for, able, connected in sense, etc." by taking into consideration this 'double aspect' of *sam-*: *samartha-* is he the object of whom presupposes, aims at, has reached, its complement, or (more frequently) constitutes the complement needed (to perform some deed).

1) E. Sieg, W. Siegling, W. Schulze, Tocharische Grammatik, Göttingen 1931, p. 255; A.J. Van Windekens, Morphologie comparée du Tokharien, Louvain 1944, p. 28 ff.
2) See C. Bartholomae, Altiranisches Wörterbuch, 1772 f.
3) W.D. Whitney–Ch.R. Lanman, Atharvaveda Saṃhitā translated.., Harvard (1905), p. 399: "... further".
4) See Nirukta 1,3. See also Hemacandra, Anekārthasaṃgraha 7,16.

The so-called comitative and intensive functions of the prefix *sam-* are usually kept apart, and the latter is considered a younger modification or 'obscuration' of the former [5]. This point, the 'rise' of the intensive and perfective function of verbal prefixes, has, to my mind, not always found adequate treatment. It would be better not to imagine that as long as a prefix had its fundamental sense there was no intensive or perfective function, or to suppose that the latter developed when the original function has faded [6]. As far as IIr. *sam-* is concerned both functions, in all probability, already combined in prehistoric times. This does not imply that in any particular case (e.g. *saṃrudh-* "to stop completely, to detain") both functions were obvious, as they are, for instance, in *saṃhata-* "closely joined or united with, struck together, coherent, forming one mass" and "compact, firm, strong, intensive". Analogical processes always have a wide scope.

In further support of this semasiology of IIr. *sam-* I draw attention to the derivative *samyañc-* [7]. One of its meanings is "facing one another, being turned towards each other", e.g. of a copulating human couple: AitBr. 2,38,5 *samyañco bhūtvā dvipādo retaḥ siñcanti*; ṚV. 1,69,1 sky and earth are called *samīcī*: *saṃgate dyāvāpṛthivyau* (Sāyaṇa), "die beiden gepaarten (Welten)" (Geldner). In the ṚV. it often means "combined, united": of a married couple (8,31,6), of *mithunau* (1,179,3), of mother and daughter (3,55,12), of ten sisters (3,29,13), of night-fall and day-break (1,96,5). The adverbial *samyak* means "completely, thoroughly, correctly, truly, properly, in the right manner". Beside *pratīka-* "adverse, turned towards; exterior, appearance, face, front" and *abhīka-* "meeting together, collision etc." *samīka-* is a "hostile encounter".

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5) See e.g. W.D. Whitney, A Sanskrit Grammar[5], Leipsic 1924, p. 396 f.; A. Thumb, Handbuch des Sanskrit, Heidelberg 1905, p. 444; L. Renou, Grammaire sanscrite, Paris 1930, p. 145.

6) Compare e.g. the recent Griechische Grammatik by E. Schwyzer-A. Debrunner, II, München 1950, p. 267. As is well known, both functions recur in Greek: ἁ ἀθροιστικόν and ἐπιτατικόν, Schwyzer, Gr. Gramm., I, p. 433.

7) For the form of this word Renou, Grammaire sanscrite, p. 347.

The Latin *semper* "always" is usually explained as "une fois pour toutes > toujours, in einem fort > immer", from **sem-* "one" [8]. The second element of the word is rightly considered identical with the last part of *parumper* "for a short time"; *paulisper* "for a moment" etc. [9] and with the well-known Greek περ which "adds force to the word to which it is added"; cf., especially, its intensive use in μίνυνθά περ "a very little", πρῶτόν περ "first of all", ὀψέ περ "at length", and the emphatic οθένος ἀνέρος ἀμφότεροί περ σχῶμεν Il. 21,308 [10]. I am, however, not convinced that **sem-* means "one" in the sense of "in einem fort". The meanings expressed by the Av. *maṯ* < **smat* (cf. AInd. *smat*) may lead us to a more plausible interpretation: as a preposition it means "(together) with", and as an adverb "always, for ever". As a first member of compounds it can likewise stand for both "provided with" (bahuvrihi, e.g. *maṯ.pərəsu-* "together with the questions"), and "always" (*maṯ.saočī.buye* "to be ever in flame"). In Vedic usage the word *smat* [11] serves as an adverb or 'preposition' to express the sense of "together, along with" (the phrase *smat sūribhis* which repeatedly occurs, 5,41,19 *sman nadītbhir urvaśī vā gṛṇātu* and similar passages show that the idea of belonging together or complementing is not absent), and of "at the same time" (10,61,8; cf. also 1,100,13 *tásya vájraḥ krandati smát suarṣā́*); it moreover occurs in bahuvrihis in the Avestan way. The sense of "always" does not occur as far as I see. There is sufficient evidence for assuming that in the Av. *maṯ* both principal functions of the IIr. *sam-* recur.

The AInd. equivalent of Lat. *semper* is *sadā* "always, ever, perpetually, continually" which omnium consensu contains *sa* < **sm-*; compare *tadā* "at that time"; *yadā* "when etc.". Its Vedic by-form *sádam* is interesting because it combines this meaning with that of "at any time"; Germ. "je, jemals, irgend". In negative sentences the 'indefinite' and the absolute sense of such words are no longer distinct: *na sadā* = *na kadācit* "never" (cf. also ṚV. 4,3,13).

The same function of the element *sm-* can, as far as I see, be recognized in the Gr. ἅπας, which being in frequent use from Homer downwards and expressing the general idea of "quite all, the whole", is a so-called strengthened by-form of πᾶς; compare σύμπας

8) See Ernout-Meillet[3], p. 1082; Walde-Hofmann[3], II, p. 513; Walde-Pokorny, II, p. 488.
9) Compare also Leumann-Hofmann, Lat. Gramm., München 1928, p. 253.
10) M. Niedermann, Rheinisches Museum 52 (1897), p. 505.
11) Because of the occurrence of the by-form *sumat* ancient Indian authors explained the word as *su- + mat = kalyāṇa-*, *śobhana-* etc,; the longer form is, however, preferably to be considered a product of svarabhakti: Wackernagel, Altind. Gramm. I, Göttingen 1896, p. 56, Monier-Williams, Skt. Engl. Dict. 1271 considers its being connected with the particle *sma* probable; according to Grassmann, Wtb. 1613 it is an ancient neuter form of *sama-* (**samad* > *smad*; 10, 61,8 *smád ā́ páraid ápa dabhrácetāḥ* the word which is often found at the beginning of a pada has indeed much in common with the adverbial *tad*).- See also L. Renou, Gramm. védique, Lyon 1952, p. 36.
12) To my mind Walde-Pokorny, II, p. 489 is not right in following H. Pedersen who at the time pronounced the opinion that ἅπας was formed after the model of σύμπας (KZ. 39, 1906, p. 376).

"all together, the whole etc." in which συν- conveys the idea of completion, of "altogether, completely" [12]. The idea of "complete, completely" conveyed by the IE element *sem-* is also manifest in the widespread ancient German *sin-* which helped to form compounds denoting a completeness: OEng. *sin-scipe* "wedlock"; *sin-hīwan* "married people" (*hīwa* "member of a family"); ONo. *sī-fella* "uninterrupted series", or general occurrence: OHG. *sin-vluot* "a general, complete or huge flood, deluge", or the absolute degree (completeness) of a property: OEng. *sinfulle* "endless" (hence the shade of meaning apparent in OEng. *sin-grim* "valde dirus"; *sin-snāed* "a huge portion of food"; *sin-here* "excercitus permagnus"). In most cases this element *sin-* denoted the temporal "always, everlasting" ('complete' wuth regard to time): OEng. *sin-nihte* etc. "eternal night"; *sin-birnende* "continually burning"; *sin-sorg* "moeror assiduus", *sin-grēna*, Germ. *sin-grün* "the herb sempervivum, houseleek"; OEng. *sin-drēam* "jubilum aeternum". Cf. also Got. *sin-teins* adj. "daily", adv. "always". It is possible to assume that the same specialization of meaning, to wit "completely" > "everlasting", lies at the root of the historical Lat. *semper*.

Passing mention may be made of the numeral adverbs: AInd. *sakṛt* etc. In *sakṛt* "once (semel)", "immediately", "once = formerly, ever (*mā sakṛt* "never"), once for all, for ever" the same main connotations recur [13]. The purely arithmetical meaning may have developed when the word was opposed to "twice" or "often": in Greek we often come across ἅπαξ ... οὐχὶ δίς; πολλάκις καὶ οὐχὶ ἅπαξ, or in phrases like AInd. *sakṛd ahnaḥ* "once a day".

A few words must also be said on the 'indefinite' sense conveyed by words which are almost generally regarded as etymologically belonging to **sem-* = Gr. εἷς. The Got. *sums* < **sṃmo* (*sm̥mo-*) was used to translate τις "a certain, any, some". It is identical with the Medieval Dutch *some, som* (still used in Flemish dialects) "the one or the other, something" as opposed to the whole (e.g. *niet geheel maar som* "not all but some"); in the plural it meant "some (people)", also in contradistinction to "others", in a complementary sense. In the course of time it was replaced by *sommig*, which is formed by means of the same suffix as *enig* "only" (~ Got. *ainaha*, Lat. *ūnicus*); however, it survives in the adverb *soms* and *somtijds* "sometimes", the former at the time also expressing the sense of "partly". The Engl. *some* (OE. *sum*) is the identical word: "a certain, not specifically named or known person or object"; in the frequent phrase *some or other* the original sense of: a part of a whole (when presupposing its complement) is still evident. From the same basic form we also find Ved. *sama-* "any, every, each" [14], whence *samaha* "anyhow, somehow, somewhere": AthV. 6,24,1 *síndhau samaha saṃgamáḥ* "in the Indus somewhere (is their) gathering". This *sama-* expresses a complementary idea RV. 6,51,6 *vṛ́kāya vṛkyè samasmā aghāyaté* "to the wolf, to the she-wolf, to any (other) evil-doer". I feel tempted to see a similar sense in 6,27,3 *nahí nú te mahimánaḥ samasya... vidmá / ná rā́dhaso-*

13) For particulars see Wackernagel-Debrunner, o.c., III, p. 423 ff.
14) Wackernagel-Debrunner, o.c., III, p. 577 f.; A.A. Macdonell, Vedic Grammar, Strassburg 1910, p. 304.

rādhaso nū́tanasyéndra "we did not know any aspect of your greatness, Indra, nor your recent bounties". Parallel in form is, further, the Gr. ἀμό-ς [15], which is equivalent to τις and survives in ἀμοῦ "somewhere", ἀμῇ "in a certain way", ἀμόθεν "from some place" etc. (cf. ἄλλοθεν "from another place" etc.), and, besides, in Ionian οὐδαμο- which is used only in the plural οὐδαμοί: "none" = Att. οὐδένες from οὐδείς < οὐδέ + εἷς in the sense of "any, a person", "not one, not even one" being οὐδὲ εἷς. It may be noticed that ἀμο- was surpassed in vagueness by τις which did not even distinguish masculine and feminine forms. These words can therefore be considered as instances of 'indefinites' sprung from an element which in previous times formed part of a set of 'complementary pronominalia'.

15) Schwyzer, Griech. Gramm. I, p. 617.

Among the IE numerical systems the Latin is characterized by the possession of the well-known parallel series of cardinals, cardinals used in connection with pluralia tantum, collective numerals [16] and distributives-iteratives, leaving out of consideration the ordinals, multiplicatives, and the so-called numeral adverbs, which are not foreign to the cognate languages. This parallelism, which is systematic to a high degree, impresses us as ephemeral: it has been given up in the Romance languages, except *singulus* which because of its meaning and function [17] proved a word by itself: OFr. *sengle* (*sangle* etc. "seul, isolé; chacun, simple"), hence Eng. *single* which preserves several connotations of the ancient derivatives of the element **sem-*: "not double or compound" (*a single valve*), "performed by one person on either side" (*challenged to single combat*; 'singles' at tennis); "solitary" (spec. "unmarried": *a single man*); cf. also *a single ticket* etc. [18]. The meanings conveyed by the Eng. *unique*, from Lat. *ūnīcus*, are, in a significant way, widely divergent: "having no like or equal, unparalleled; single in kind or excellence, etc." Though isolated *singulus singuli* has survived in a large part of its applications, which besides expressing the idea of "alone, without a partner or without others" (sing. and plur.) comprised also the indication of oneness as opposed to *bīnī, ambo, duo* and *universi* [19]. It may be of use to recall part of the Latin system:

cardinals	card. with plur. tantum	collectives	distrib.
una domus	*una castra*	*uni*	*singuli*
"one house"	"one encampment"		"one (for) each"
	binae litterae		
duae litterae	"zwei Briefe"	*bini boves*	*bini*
"zwei Buchstaben"	*bina castra*	"a pair of oxen"	
	"two encampments"		
tres aedes			
"three temples"	*trinae aedes*	*trini boves*	*terni*
tres domus	"three houses"	"a triad of oxen, 3 oxen"	"three together for each, three together, three at once".
"three houses"			

What strikes us most is firstly that the way in which the suppletive alternants *uno-* and *singulo-*, *duo-* and *bino-*, and the forms

16) For this term see K. Brugmann, Die distributiven und die kollektiven Numeralia der indog. Sprachen, Abh. phil.-hist. Kl. Sächs. Ges. d. Wiss. 25, Leipsic 1907, p. 4 ff. Collective nouns meaning "group of three etc." occur, it is true, in considerable variety in the IE. tongues.

17) For the special position of the first numeral see also my "Observations on ordinal numbers" in Bingkisan Budi 'Festschrift'-Van Ronkel Leyden 1950, p. 135 ff.

18) Compare also the derivative Lat. *singularis* "separate, single, individual; excellent"; hence not only the Engl. *singular*, but also Fr. *sanglier* "boar" < *(porcus) singularis* "(porc) solitaire".

of the third numeral respectively supply each other's place is not the same in each case; secondly: as far as can be judged by appearances *unus* and *bini* represent the same morphological category (suffix *-no-*); thirdly that in collective and distributive functions *trini* and *terni* are kept apart.

The related languages availing themselves of other devices to express the idea of 'distribution', we can turn to the collectives. Here three types stand out [20]; the type AInd. *dvayá-*, *trayá-* adj. "twofold, double," and "triple, threefold"; *dvaya-m* "couple, pair, two things"; *traya-m* "triad"; Lit. plur. *dvejì trejì* etc.; that represented by the AInd. *dvika-m trika-m* "two, pair; triad"; OHG. *zwisk* "twofold": suffix *-ko-*, and the forms in *-no-*, which are e.g. represented by the Lit. *dvynù* "twins", Russ. *dvójni* "id.", OHGerm. *zwirnēn, zwirnōn* "to twine (forming into a double thread)"; Eng. *twine* "fabric made of double or twisted thread"; the first syllable of Eng. *twenty*, Dutch *twintig* etc. Sogdian δβn-, δyβn-, *δ'βin-* "pair, set of two" (used of the two breasts, of the eyes, the feet etc.), OIcel. þrennr "threefold", *ferner* "four" etc. The Latin collectives *bīnī, trīnī* etc. which are to be connected with the last group are remarkable for their unlimited number: *quīnī, sēnī, dēnī, centēnī, millēnī* [21].

At first sight it is surprising that Lat. *ternī* which is a regular form in accordance with phonetic change in other words [22] should have been used as a distributive numeral, the function proper to Latin. Here Walde-Hofmann's dictionary [23] justly draws attention to the influence of a factor which often plays a rôle in the formation of numerals, to wit assonance. The words *ternī, quaternī,* and *alternī* < **altro-no-* "alternating, in turn" rhyme (cf. *ternīs versibus; alternīs versibus*) and the latter may be regarded as having stimulated the distributive function of the former. *ternī* developing into a distributive, [24] its original collective function which is retained in *ternio* "the number three,

19) The etymology of the word upheld by Ernout-Meillet, o.c. p. 1109 (~ Got. *ainakls* "μεμονωμένος" with *-go-lo-*) must to my mind be preferred to that proposed by Leumann, o.c., p. 202.

20) See Brugmann, o.c., p. 21 ff. Though part of the etymological combinations and of the conclusions drawn by this scholar have deservedly been rejected or disputed, his work is always a starting-point for new research. See also F. Sommer, Zum Zahlwort, in the Sitzungsber. München, ph.-h.Kl. 1950, 7, p. 18.

21) The higher numerals in *-ēnī* are apparently younger forms; *mīllēnī* is not found before Gaius. It would seem that only the lowest collectives were of pre-Latin origin and the others are due to analogical processes. The opinion pronounced by Ernout-Meillet, o.c., p. 127 (*bīnī* a younger form derived from *bis* is, however, not convincing. Their discussion of *ternī* (p. 127; 1240) is not free from self-contradiction. The question raised by F. Solmsen, Paul u. Braune's Beiträge 27, p. 360 and other scholars, and discussed by Brugmann o.c., p. 31, whether *bīnī* comes from **dᵘisno-* or from *dᵘīno-* need not engage our attention here; although particulars remain obscure, the distinction made by Brugmann cannot be maintained.

22) Whether it be < **tris-noi* (cf. Leumann-Hofmann, o.c., § 102, 1a) or < **tri-noi* (cf. *certus* < **kritos*: Gr. κριτός; see also C.D. Buck, Comp. Grammar of Greek and Latin, Chicago 1942, p. 100).

23) A. Walde, Lat. Etym. Wörterbuch, 3. Auflage van J.B. Hofmann, Heidelberg 1938, p. 106.

24) It should be remembered that both *quaternī* and *quadrīnī* are distributively and collectively used, though the tendency to a similar distinction such as exists between *ternī* and *trīnī* is not absent.

triad", was taken over by *trīnī* which is sometimes considered a younger form modelled on *bīnī* [25]. What may be taken for granted is that the higher collectives, *quīnī* etc., are formed by analogy of *bini, trīnī*.

But we have also to account for the distributive function of *bīnī* itself, for that of the higher numerals in *-nī* and for their acting as cardinals when attending a plurale tantum. Referring for the discussion of this point to the relative publications by Miklosich [26] and Brugmann [27], we can regard the function last mentioned as having resulted from the general 'collective sense' of these words in *-no-* (Lat. *trini boves* "a triad of oxen" [28]; *trina ratio vivendi*; OIcel. *tuennr bardagi* "a double grief"; *tuennar dyrr* "two doors"; Lat. *trinae aedes* "three houses"; OChSl. *dvoję knigy* "zwei Schriften").

Now the question may arise whether the occurrence, in these functions, of these forms in *-no-* in Latin, German and Balto-Slavic has something to do with the fact that in these very languages the first whole number is denoted by a stem **oino-* which likewise contains a suffix *-no-* [29]. A survey of the relevant forms [30] shows that **oino-* besides expressing the arithmetical idea of "one" has some interesting connotations of its own: Lat. *ūnus* often applies to persons or objects which are the only existing representatives of their kind, the one without another or without companions, the absolutely single one, hence "alone", Germ. einzig, alleinig, allein (cf. also *unam solam civitatem; quem tantum unum fortuna reliquum voluisset; summus vir unus omnis Graeciae*). It is, moreover, worthy of notice that plural forms of *uno-* are not rare: Caes. B.G. 1,32 *animadvertit Caesar unos ex omnibus Sequanos nihil earum rerum facere* "as the only group of all"; (Varro L.L.) *ad hunc quadruplicem fontem diriguntur bini, uni transversi, alteri derecti*; (Ter. A. 674) *ex unis geminas mihi conficies nuptias*; further, *unae quadrigae* etc. In this use, which is not limited to pluralia tantum, the stem *uno-* runs completely parallel to *bino-* etc. (see above).

So I cannot resist the temptation of concluding that *oino-* originally was a word like the above 'collectives' in *-no-* which indicated "Zusammenfassung, Zusammengehörigkeit, Gruppierung" (Brugmann); it must have symbolized the person or object which forms a group by itself, and hence is alone. In a similar way the Skt. *eka-* belongs to the same morphological class as *dvika-* "consisting of two; two; pair" [31]: ṚV. 1,7,9 (Indra) *yá ékaś carṣaṇīnā́m vá-*

25) See Leumann-Hofmann, o.c., p. 295; Walde-Pokorny, o.c., p. 106. Other authors, e.g. Brugmann, Grundriss der vergl. Gramm. der Indogerm. Sprachen[2], II, 2, Strassburg 1911, p. 78; Buck, o.c., p. 235 prefer to derive *trīnī* from **trisno-*; compare the German forms. It is immaterial to our argument.

26) Fr. Miklosich, Vergl. Grammatik der slavischen Sprachen, Vienna 1868 ff., IV, p. 59 ff.

27) Cf. Brugmann, Die distrib. u. koll. Numeralia, p. 36 ff.; Grundriss, II, 2, p. 79 ff.

28) Compare such locutions as the Engl. *a yoke of oxen*.

29) For the related Celtic words see H. Pedersen, Vergl. Gramm. d. Kelt. Spr., II, Göttingen 1913, p. 126.

30) See Walde-Pokorny, o.c., I, p. 101; J. Pokorny, Indogermanisches etymologisches Wörterbuch, Bern 1948 ff., p. 286.

31) Cf. also Walde-Pokorny, I, p. 101.

sūnām irajyáti "... der allein über die Völker, über die Schätze gebeut"; 110,3 *ékaṃ sántam akṛnutā cáturvayam* "ihr habt (sogar jene Schale), die einzig war vervierfältigt"; AthV. 10,8,11 *tát saṃbhṛ̃ya bhavaty ékam evá* "that, combining, becomes one only". Hence these stems were also used to express our "alone": cf. Skt. *eka + eva*, Germ. *allein*, Eng. *alone* etc., OChSl. *jedinŭ* [32].

The phenomenon of two words for the unity existing side by side with each other in the same language, one denoting the absolute unity and the other the idea of "single", is not confined to Indo-European. Whereas, in Jabêm (New Guinea), *teŋ* means "one, somebody, another", "alone" is expressed by locutions based on the word *tau* "person, human being". In the Javanese vocabulary of courtesy [33] *sĕtuñgal* replaces the common word for "one" *siji* [34]; the base word *tuñgal* expressing the idea of identity, unity, community, is etymologically identical with Mal. *tuñgal* "sole, unique, alone", but also "the one", e.g. *anak tuñgal* "only child", *babi t.* "lone boar" (cf. Fr. *sanglier* < Lat. *singularis*), *Sañhyañ T.* "one and only God". In Sundanese *tuñgal* may be used instead of *hiji* "one" (~ Jav. *siji*). Whereas, in Karo-Batak (Sumatra), *sada* "one" also expresses the ideas of "belonging to (other people etc.)" and "unanimous", the word *sisa* means "one, alone, by oneself". Similar phenomena play a part in Negro-African languages: for "one" there is often two themes in the same idiom, the one conveying the sense of "one, single", the other that of "only". However, there has sometimes been a confusion of "one" and "alone" [35].

Returning now to the Latin numerical system we might be tempted to conclude that the above observations may provide the explanation of the way in which the forms *uno- : singulo-*, and *duo- : bīno-* supply each other's place. If our above hypothesis with regard to the original function of **duō[u]* is correct, it is clear that this word which emphasized unity-in-duality could, if wanted, attend, inter alia, those nouns which are substitutes for an original dual [36]: cf. AInd. ṚV. 1,185,2 where *dvé* applies to *dyā́vā pṛthivī́* "Sky and Earth". *Duae nares* must have referred to "(the) two nostrils", cf. *naris altera* "one (of the) nostril(s)". To denote "two noses" the stem *bino-* was used: cf. OIcel. *tuennir skór* "two pairs of shoes". Whereas, further, *uno-* was, in addition to the above cases, the right word to express oneness in *una domus* "one house" and similar cases, *singulo-*, deriving from a stem which expressed the idea of "oneness to be complemented" (cf. *oculi vel ambo vel singuli* (Cels.), originally was not the proper word for expressing these connotations. There was, however, no difficulty in using it as a distributive: when pronouncing a sentence like (Cic.) *legiones singulas posuit Brundisii, singulas Tarenti* "he encamped one (of his) legion(s) at B., one at T." one presupposes that there were two legions, or an army consisting of two legions components of which are now encamped in two different localities. Hence also *semel unum singulum* est "once 1 is one": originally

32) See further on.
33) See Lingua I, p. 333 ff.
34) See above.
35) L. Homburger, The Negro-African languages, London 1949, p. 202.
36) See J. Wackernagel, Vorlesungen über Syntax I [2], Basel 1926, p. 87.

"once the absolute one remains a single one, is not more than one, is one-without-another".

The element *sem-* is also at the root of Lat. *semul, simul* which conveys the sense of "at the same time, together with (another)", hence also *simultas* < **semoltas* "rivalry, competition, strained relations"; *unā*, on the other hand, is as a rule used when local or temporal associations are to be expressed: *unā fui, testamentum Cyri simul obsignavi cum Clodio* (Cicero).

It would be an interesting but very difficult task thoroughly to investigate all the connotations and the whole range of the applications of all words for "one" in the various IE (and other) languages [37]. If I am not mistaken the Greek εἷς μία ἕν had a wider range of connotations than the Lat. *unus*, and I would feel inclined to believe that the shift of meaning which the word has undergone is not foreign to this. First the distributive function of Lat. *singuli* is performed by εἷς with a preposition: κατ' ἕν "one by one" etc. It can further appear in phrases expressing the idea conveyed by the Lat. term *alterno-*: παρ' ἕνα "alternately", μίαν ἀντὶ μιᾶς "id." It can further be used in opposition to "another": ἓν μὲν... ἓν δὲ...; also ὁ μὲν... εἷς δὲ... εἷς δ' αὖ, by the side of Lat. *unus... alter* or *unus... alius* (εἷς μὲν ... ἕτερος δὲ... is also found). The word is also used in the sense of the Eng. "single (not united)": Thuc. 1, 80 πλούτῳ τε ἰδίῳ καὶ δημοσίῳ καὶ... ὅσος οὐκ ἐν ἄλλῳ ἑνί γε χωρίῳ Ἑλληνικῷ ἐστιν. On the other hand the Greeks resorted to μονος- which in their classical language replaced the Homeric οἶος – where the Romans would have preferred *unus*: a μονόκερως is "(an animal) with but one horn": Lat. *unicornis*, OChSl. *ino-rogъ*; μόνοζυξ, μονοζυγής "yoked

37) Such observations as given by Ernout-Meillet, o.c.[3], p. 1324, being incomplete and not correct in every respect, do not account for all particulars: "L'ancien nom de l'unité, qui subsiste dans des mots tels que *simplex, singulī*, a disparu à l'état isolé. Pour obtenir une expression plus forte, on l'a remplacé par le mot signifiant "unique"..." The authors, moreover, disagree as to "the original word for one" (as far as I am able to see there is no sufficient ground for such a postulate): Buck, A dictionary of selected synonyms in the principal IE. languages, Chicago 1949, p. 937 holds the view that in Greek εἷς has replaced the original numeral for "one" **oi-no-*. The very fact that *sem-* has been preserved in a minority of languages, Latin, German, Indo-Iranian etc. using **oi-no-* etc., may, on the contrary, perhaps also have something to do with the 'horror of the void', the aversion to mention words for "incomplete, broken etc.": see W. Havers, Indog. Forsch. 60 (1952), p. 234. P. Kretschmer's assumption (Einleitung in die Geschichte der griechischen Sprache, Göttingen 1896, p. 12) that the word for "one" developed later than the other numerals, and that, when the need for it arose, it was borrowed from words already existing for "alone", "together", "like", though inexact when taken literally, must be read thus: the abstract meaning "one" did not develop until after a series of numerals was conceived, the words for "one" originally expressing at the same time such ideas as "alone", "together" etc. The combinations ventured by E. Adelaide Hahn, in The indefinite-relative-interrogative stem sem-sm- smo-, in Language 18 (1942), p. 83 ff., apart from being too speculative, suffer from a lack of insight in the function of the 'numeral' one in semi-primitive civilizations. This author is, broadly speaking, right in that the meanings of the stems under discussion came to overlap at an early time. I now desist from discussing other opinions expressed on this subject, part of which may be regarded as antiquated (copious bibliographical details are given by Hahn).

alone" (but ἑτέροζυξ "without its yoke-fellow"): cf. Lat. *unijugus* ' 'with only one cross-beam"; μονόμαζος "with but one breast": cf. *unimammae* (which is said of the Amazons who were supposed to have got rid of the right breast, that it might not interfere with the use of the bow); μονογενὴς παῖς "only or single son": *unigena* etc. The compounds beginning with μονο- are very numerous, and on the whole correspond to Skt. words with *eka-* : μονόπους "one-footed": *ekapad-* (Lat. *cum pede uno*); μονόχρως "of one colour": *ekavarṇa-* etc. One might also compare such phrases as Hdt. 2,25 ὁ δὲ Νεῖλος ... μοῦνος ποταμῶν. The Greek compounds formed with ἑνο- are few, young and of a scholarly character: ἑνοείδεια "singleness"; ἑνοποιέω "combine in one" (Aristoteles). Interesting is ἑνόζυγος occurring in an inscription and applying to "single pairs of gladiators matched with beasts"; here μονο- could not do duty. The neuter τὸ ἕν "unity, the One" is a philosophical and mathematical term.

Just as, in Latin (e.g. in Plautus, Caesar, and cf. Rhet. Her. 3,33 *duplice similitudine... unae..., alterae..*), *unus... alter* is found beside *alter... alter* – in enumerating *unus, alter* ("the second"), *tertius* etc. was only to be expected – [38], so a correlative function of *oino-* etc. is not lacking elsewhere. In Buddhist Sogdian *'yw*, which represents the common Iranian **aiwa* [39] is also used to express "one" as opposed to "the other", and also "one" in "one another". Yet a younger form *ywtr* **ēwtar* was, apparently for the sake of emphasizing the idea of alternation, created after *katāra* "whether". Here the ancient Indian literature is instructive: in disjunctive sentences *anya-... anya-...* is usual in the oldest texts (e.g. ṚV. 1,164,20; AitBr. 5,30,3; ŚatBr. 2, 1,4,6), and persistent in the later period, but from the Taitt. Ār. (10,10,1) and Śvet. Up. (4,5) onwards we also find *eka-.. anya-* and other locutions [40]. However, *eka-* and *anya-* actually occur from the very beginning in the same context, but, as far as I can see, in the oldest texts so as to isolate or separate the entity denoted by *eka-*, or to oppose it to other entities. Thus Jaim. Br. 160 Caland *Prajāpatir vāvedam agra eko 'sṛjyata nānyaṃ dvitīyaṃ paśyamānaḥ* "P. wurde zu Anfang hier allein erschaffen; er sah keinen anderen als zweiten". In a similar way the word *eka-* occurs ṚV. 8,29,1-7 seven times to signify a unique divine being (Sun, Fire etc.); in 8 and 9 two pairs of divinities (Aśvins, Mitra-Varuṇa) are indicated by *dvau*. These words consistently occupying the second place of the stanza, the poet and his hearers must have been conscious of their reciprocal relation. But I would not take them as introducing disjunctive sentences; the meaning apparently is: "it is one (unique) divinity, who... it is two, who...". Cf. also 1,162,19. ṚV. 7,103,6 *gómāyur éko ajámāyur ékaḥ pṛśnir éko hárita éka eṣām* individual frogs are meant, which are, in a way, enumerated. Cf. RV. 1,95,3 *tríṇi jānā... samudrá ékaṃ divy ékam apsú*, which, I think, may haplologically be taken for *s. e. d. e.* < *ekam*>

38) The reciprocal *unus alterum* instead of *alter alterum* does not occur before Vitruvius and late Latin; hence Fr. *l'un l'autre* etc.

39) See R. Gauthiot, Mémoires de la Société de Linguistique de Paris 17, p. 137 ff.; E. Benveniste, Essai de Grammaire sogdienne, II, Paris 1929, p. 138 f.

40) Enumerated in the Petrograd Dictionary, I, 263.

a. ṚV. 1,161,9 f. dealing with the three Ṛbhus has: ... *íty éko abravīd... íty anyó abravīt / ... praíko abravīd...; ... éka udakaṃ gắm ávājati māmsám ékaḥ pimsati... / ... éko ápābharat*; here *eka-* is "an individual Ṛbhu", it marks the persons out as acting alone or individually.- Cf. also 164,44; 4,58,4. In such passages *eka-* has, in my view, the same isolating and individualizing force as e.g. in ṚV. 10,80,2 where *eka-* is opposed to *purúṇi* ' 'many". Thus also in dual and plural form *eke yuvatī* AV. 10,7,42 means "a certain, but solitary, pair of maidens".

The function of *anya-... anya-* is, in the ancient Indian texts, different and in perfect harmony with that of Lat. *alter... alter* in Plaut. Amph. 481 *pariet filios geminos duos alter decumo mense nascetur puer..., alter mense septumo*. Almost always the whole entity of which the *anya-...anya-* are the components is expressly mentioned, or at least known: cf. AV. 13,2,11 "they two (*etau*) move on one after the other... the one (*anyaḥ*)...the other (*anyam*); ṚV. 1,164,20; 3,55,15; 1,181,4; 2,40, 4 and 5; 3,31,2; 10,137,2; AthV. 2,4,5. Especially numerous are such passages where two divinities such as Indra and Varuṇa, Indra and Pūṣan, Agni and Parjanya are, as a pair, called by their names and then, by means of an *anya-... anya-* construction, mentioned individually: 6,52,16 *ágnīparjanyāv ávataṃ dhíyam me... / íḷām anyó janáyad gárbham anyáḥ...*; 57,2; 68,3; 7,82,2; 83,9; 85,3. The disjunctive construction is, further, also found to distinguish two parts or components of one and the same being or entity: ṚV. 1,103,1 *kṣamédám anyád divy anyád asya* "on the earth (is) this one (part), in heaven the other (part) of him"; 123,7; 5,29,10; 10,119,11. Compare also the use of the plural in such passages as ṚV. 3,9,3; 10,14,3 where the whole is more or less clear from the context [41]. In this connection the well-known reciprocal use [42] (cf. AthV. 3,2,6; 30,1) might also be touched upon. As *eka-... anya-*, in the course of time, appeared instead of *anya-... anya-*, so it has in the Middle-Indian period found its way into the sphere of that construction. Beside *eka-*, *ekatama-* "one of many" and *ekatara-* "one of two" came in the ŚatBr. and ṢadviṃśaBr. and PraśnaUp. respectively into being.

In Avestan (and Old-Persian) the meaning of *aēva-* etc. (~ Gr. οἶος "alone, lonely") is that of a strongly marked 'emphatical numeral': "alone, single, one only, one and no more, one", in contrast to any other number or an unspecified plurality [43]. We must leave it to specialists to decide how far various subtleties in the use of the corresponding words in Balto-Slavic and other languages (Lith. *vienas* "one and "alone", OChSl. *jedinŭ* "idem", etc.) agree with these facts. The observation may, however, be made that the connotations expressed by the Lith. *vienas* "one" are not incompatible with the above observations. As to German, the Got. *ains* "one" serves also to translate μόνος Marc 9,2; cf. also 2,26. In medieval German texts the word could even convey the sense of "solitarius, οἶος" [44].

41) ṚV. 6,24,5 *anyad..., anyad...* is used to indicate the idea of "now this... now that...".
42) I refer to Wackernagel-Debrunner, o.c., p. 491 f.; Wackernagel, Vorlesungen über Syntax[2], Basel 1928, II, p. 96 ff.
43) See the numerous passages quoted by C. Bartholomae, Altiranisches Wörterbuch, 22 ff.
44) For particulars see Grimm, Deutsches Wörterbuch III, 112.

So, when it is stated that the numeral 'one' is often used by itself for 'alone' the underlying idea of the latter being an emphatic 'one' [45], this would appear to mean that 'alone' was the more original connotation of the group **oino- *oiko- *oiwo-*. In the course of time derivatives of this element and phrases containing it came into use [46], hence e.g. MHG. *al-eine*, NHG. *allein*, Dutch *alleen*, OEngl. *eall-ána*, NEngl. *alone*, from all as adv. "wholly" and the word for "alone, sole, one"; Lith. *vienatinis*; Skt. *ekaka-, ekākin-* etc. It would, on the other hand [47], be interesting exactly to know the connotation of Toch. *sasak* "alone" which was in all probability derived from *sem-* [48]. It is sufficiently well-known that non-Ind. Eur. languages likewise express "one" by "alone": thus Chiquita of South America [49], Negro-African idioms, etc.

Having arrived at the end of these reflections on the sense of the numerals "one" and "two" in the ancient Indo-European languages we should like to refrain from defending or proposing any glottogonic speculation on the prehistory of the words concerned. The word for "two" has been explained in various ways [50], but, apart from the drawbacks of root segmentation in general and the ambiguity of the elements supposed to have coalesced into *duō[u]* etc. in particular, these speculations, as a rule, have regard to no more than part of the forms constituting the numeral 'two', to wit with the forms in *-ō[u]*. Such views as at the time were pronounced by Cuny [51] with reference to the *-ō[u]* forms of the dual in general, though deserving re-examination as to details, are much too speculative to bring the problems concerned nearer to their solution. The glottogonic explanations ventured with regard to the words *oino-* etc., though not absolutely convincing [52], may be correct in trying to connect them with deictic or pronominal elements [53].

45) Cf. C.D. Buck, A dictionary of selected synonyms in the principal Indo-European languages, Chicago Ill. 1949, p. 937 f.
46) See the relevant grammars and dictionaries, and Buck, o.c.
47) The Gr. μόνος is usually taken as cognate with μᾱνός, Att. μᾰνός "thin (in density), rare"; see also J.B. Hofmann, Etym. Wtb. d. Griech., München 1950, p. 190. Part of the arguments adduced in favour of this etymology are indeed more convincing than the older suggestion, upheld once more by E.A. Hahn, Language 18, p. 88 f.: μόνος < *σμονϝος, from **sem-*. Apart from the complications on the formal side the connotations conveyed by **sem-* and μόνος are different.
48) E. Sieg, W. Siegling, W. Schulze, Tocharische Grammatik, Göttingen 1931, p. 193.
49) C. Conant, Smithsonian Report 1892, p. 583.
50) See e.g. Caroline T. Stewart, in Bezzenb. Beitr. 30 (1906), p. 223 ff.; M. van Blankenstein, Indog. Forsch. 21, p. 110; E.H. Sturtevant, Am. Journal of Phil. 48, p. 248; H. Hirt, Handbuch des Urgermanischen II (1932), p. 109; A. Carnoy, in 'Le Muséon' 59, (1946), p. 557 ff., and especially p. 562. For *sem-* see e.g. Brugmann, ibidem 37, p. 160 f.
51) A. Cuny, Etudes prégrammaticales sur le domaine des langues indo-européennes et chamito-sémitiques, Paris 1924, p. 22 ff. See also the detailed résumé by G. Royen, Die nominalen Klassifikations-Systeme in den Sprachen der Erde, Mödling bei Wien 1929, p. 514 ff. See also Cuny, La catégorie du duel dans les langues indo-européennes et chamito-sémitiques, Mémoires de la classe des lettres... de l'Acad. royale de Belgique, II, 28 (1931), p. 1 ff.
52) E.g. Brugmann, Kurze vergl. Gramm., Strassburg 1903, p. 364, whose explanation was justly called in question by F. Solmsen, Berl. Phil. Wochenschrift 26, p. 182.
53) Cf. also Walde-Pokorny, I, p. 101, and Pokorny, Indog. etym. Wtb., Bern 1949, p. 286.